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Horsed Cavalry and the Gas Engine's Children

By Brigadier General Henry J. Reilly

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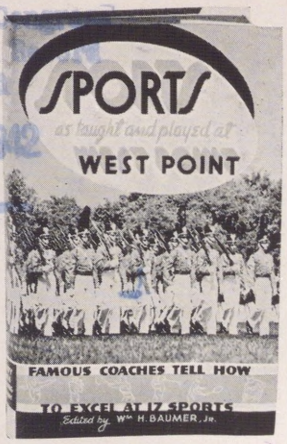

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HORSED CAVALR

By
Brigadier General Henry J. Reilly, Officers' Reserve Corps[1]

What are the powers and limitations of horsed cavalry today?

The pictures which arise in the average mind when reference is made to horsed cavalry are as far removed from what modern cavalry should be as the horse and buggy age (to borrow the famous political comparison) is removed from today's age of the automobile.

There are three entirely erroneous pictures which come to the mind of the average civilian and, if the truth be told, to the minds of too many soldiers. The first concerns the misconception of a boot-to-boot charge with lances at rest, colored pennons gaily fluttering in the breeze, starting at a thundering gallop to ride through a line of infantrymen, armed with automatic rifles, lying down on the ground six or seven hundred yards away. The second is of soldiers on horses trying to attack a maze of trenches, such as those on the Western Front from 1915 to 1917 inclusive. The third is a picture of a powerful car bowling along an excellently kept cement highway, at a speed of 70 miles an hour, flashing by cavalry soldiers going four miles an hour, to save their horses' hoofs from the hard roadway.

The first picture of the boot-to-boot charge is just about as accurate as would be a picture of a sixteenth century square of pikemen and musketeers as representative of the infantry of today. After all, there is no more reason why a man mounted on a horse, armed with one or more automatic pistols, and the same automatic rifle as the infantryman, should not be considered a modern warrior of potential power than there is that the infantryman of today should no longer be considered an infantry soldier because he has abandoned the pike and musket.

The second picture of the Western Front trench system, as the condition which a cavalry force must face, could not be true anywhere in the world, except between the North Sea and the Alps. This because nowhere else in the world is there such a line with both flanks covered by natural obstacles and dense populations like those of Germany and France facing each other. As a matter of fact, this state of affairs was not true on the Western Front throughout the whole of the World War. From the outbreak of the war early in August, 1914, until the race to the sea had completed the trench line in the latter part of that year, the country from the Oise River to the British Channel was free of trenches and one in which mounted troops both could and did operate. Also, after the Franco-American assault between Soissons and Château-Thierry in July, 1918, there were various occasions in which the fighting was in open country, free from trenches and, therefore, country in which cavalry could have operated.

The third picture, of course, could only interest those who have never seen war. Anyone who has seen war knows that the smooth well kept highways of peacetime are soon changed into routes full of holes with bridges and culverts frequently blown out. Even when repairs are made, they are temporary, with the result that high speed is impossible. Also, enemy shells and aviation bombs add to the risk incurred when driving over them.

These erroneous pictures of horsed cavalry have devel-

---

[1] Troop C, Cavalry, New York National Guard, 1899-1900. Cadet, United States Military Academy, 1900-1904. Lieutenant (second and first), 2d, 13th, and 15th U. S. Cavalry, 1904-1914. Captain, 1st Illinois Field Artillery, 1915-1917. Colonel, 149th Field Artillery, and commanding officer, 83d Infantry Brigade both 42d United States Infantry Division, 1917-1918. Has seen combat in Mexico, 1913; China, 1925; Europe, Western Front, 1914-1918 except summer 1915 when on Eastern Front; Russo-Polish War, 1920; Spanish Civil War, 1938.

ND THE GAS ENGINE'S CHILDREN

oped, however, in recent years with too little consideration for its adaptability in actual warfare. A study of victories discloses the coördinated use of many arms, each filling the rôle to which it is best adapted. Down the centuries of history, infantry, that proud "Queen of Battles," has struggled to speed up her slow movement, having the while to maintain her power to deliver and to take hard blows. By contrast to the foot soldier, the horse soldier, thanks to his mount, has had every advantage which mobility could give.

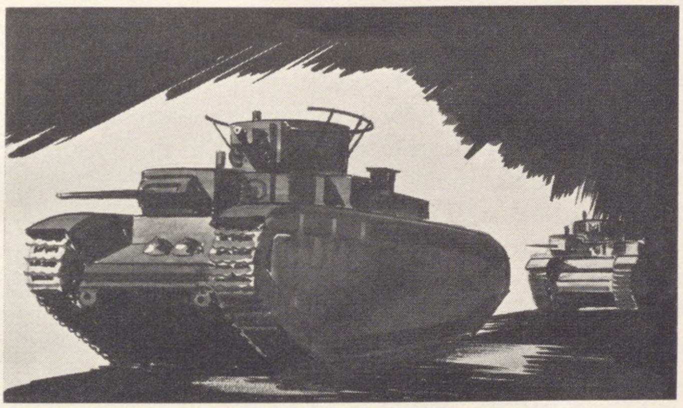
For thousands of years this ability to outmove the foot soldier both in space and time gave the horse soldier a tremendous advantage both off and on the battlefield. Probably the Mongol invasion of Europe furnishes the best example of the strategic and tactical advantages reaped by great cavalry leaders operating with well trained, well disciplined and armed horse soldiers.

With the increasing efficiency of hand firearms and their consequent increasing use, the horse soldier more and more found that his usefulness on the battlefield was limited. The industrial revolution speeded this limitation because it gave birth to rapid fire weapons not only for the infantry but also for the field artillery. In our Civil War the field artillery was kept to a limited rôle because its armament technically lagged behind the infantry and cavalry. Both, in many cases, were armed with rifles far in advance of the ordinary infantry musket which belonged in the same industrial era as the cannon of the field artillery. When French brains and industry produced the first 75-mm. quick firing field gun the field artillery stepped for the first time into the field of modern armament. From then on, with fire in battle such that infantry was frequently pinned to the ground unable to move, it was considered that men on horses could not exist.

The matter did not stop there, however. Our Civil War proved that railways could transport infantry both in large numbers and at considerable speed. Von Moltke in 1870 showed that they could mobilize and concentrate a large army with a speed never dreamt of before. At least where railways existed infantry now had, in the strategical field, a means to outspeed the cavalry.

Next came the gas engine with its children, the motor vehicles of various types—those that were armed and armored, and those without these features, both on the ground and in the sky. These new engines roared through the sky at speeds which left express trains days behind and tore over the ground faster than any race horse. To many it seemed evident that the horse belonged at last in a museum of military antiquities alongside the armored knight sent there several centuries before when the hand firearm, after a century of struggle, finally banished the bow and arrow as the dominant missile weapon for combat.

In many countries cavalrymen began laying aside their boots and saddles and taking to overalls, oil cans and monkey wrenches. What else could they do? Robbed of their battlefield supremacy by fire! Robbed of their speed by the gas engine! This move, however, gained in momentum in the years of peace between the large nations which followed the armistice of 1918. Men of great military knowledge and experience like Marshal Petain,[2] who maintained that the day of the horse was not done, were listened to respectfully but disagreed with privately. As is always the case in peace, mobility was talked of, and the power to give and to take blows in battle shoved into the background.



More and more control has passed from those men who learned from experience what it means to be actually under fire. With that passing, it has been almost forgotten that what any instrument of war or group of men can do in battle depends on what kind of target they make in that battle; in other words, how long they can remain alive under the enemy's fire.

More and more, also, the word mobile has been used when speed was intended. Less and less thought has been given to the ability to go anywhere that may be advisable from a strategical or tactical point of view, and more and more emphasis on how fast it is possible to go. As the best speeds are made under the most favorable conditions, the present tendency is to see only that the conditions are favorable. But the conditions of war are not always so advantageously ordered.

In the past few years the fighting in China, the Italian conquest of Abyssinia, the Spanish Civil War, and the German conquest of Poland have given the opportunity to study what can be done in war, and what is equally important—what cannot be done. In other words, what does actual experience in campaign and battle show as to the *powers* and *limitations* of the children of the gas engine?

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[2] Primarily responsible, despite considerable opposition, for the continuance of horsed cavalry in France.

In the first two of these wars, the great differences between the two forces engaged in each case, insofar as armament, discipline and leadership were concerned, made them special cases.

The Polish campaign was one in which a good army of the 1918 type, backed by a relatively weak air force, went down to defeat before a 1939 type army, backed by an excellent and numerous air force.

The last year and a quarter of the Spanish Civil War, on the other hand, was one in which two armed forces, being not too unequal in strength and both possessing modern armaments, fought to a finish.

The author arrived in Spain in the spring of 1938 just as Franco's army cut the governmental forces in two by reaching the Mediterranean at Vinaroz and the mouth of the Ebro. He had been there for only a short time when he became convinced that all lessons of the Spanish Civil War were important for the American army.

First, there was no continuous line of trenches stretching from one natural obstacle such as the Pyrenees to another such as the Straits of Gibraltar. The line along which the two armies faced each other was similar to the line along which the Northern and Southern armies faced each other in our Civil War. There were places in which each side was entrenched and large forces faced each other. There were others where there were lighter entrenchments lightly held. Everywhere there were long gaps in which no trenches of any kind existed.

Spain, like the United States, is a country of greatly varied terrain. There are wide plains cut by ravines and valleys, hills and mountains of all types, some wooded country, some subtropical country. The road system does not cover the country with a net work of good roads, as is true in France, Germany and England, but like the road system of the United States, consists of a relatively small number of excellent main highways with branch roads often nothing more than wagon tracks. In the mountainous districts—and no part of Spain is far from one—the wagon tracks frequently become mere trails. The climate, like that of the United States, varies from the subtropical to northern, with bitter winters of low temperature, snow and fierce wind storms.

The consequence of the lack of a continuous line was that every force had *two exposed flanks*. The advantages of a flank attack could only be gained by troops which could move over the terrain, and move fast enough to get around and make a flank attack before being discovered.

The mechanized forces simply could not negotiate the terrain over which such flank movements practically always had to be made. The infantry divisions, even though their heavy machine guns, trench mortars, ammunition, company kitchens and medical dressing stations were carried on pack mules, could and did go anywhere; but were never fast enough.

The only force which could do the job was cavalry, mounted on horses. The cavalry could negotiate the terrain which the mechanized forces could not get over, and could do so much faster than the infantry.

Throughout the Spanish Civil War mechanized and motorized troops were greatly circumscribed in their ability to move, let alone use the speed of which they were capable because of their inability to go the places that the strategic and tactical situation demanded. Another result of their inability to go anywhere and everywhere was that the enemy artillery and aviation knew where to look for them. Added to this is the fact that their size and shape make them stand out against almost any background. Therefore, they are first class targets. Even when armored, they lack protection against shell fire, and when acting alone, must choose between being destroyed and using their speed to get to a safe hiding place or out of range. This was proven again and again, the best example being the so called Battle of Guadalajara.

When in Rome, early in 1938, the author was asked by a friend, who was an Italian official, if he would like to see the uncensored moving pictures taken at Guadalajara.[3] The pictures showed beyond any doubt that the defeat was due to two things. The first was vulnerability of motor vehicles, both armored and unarmored, to fire, both from the ground and from the air. The second was due to the inability of a motorized and mechanized force to furnish its own security when stretched out in a long column. The Spanish infantry divisions on the two flanks had been left far to the rear. Had they been motorized they could not have kept up because there were no parallel roads. Motor trucks could not have negotiated the country over which these divisions were advancing. Only horsed cavalry could have done so. Not lack of gallantry on the part of the Italians, but the desire for speed regardless of the tactical situation was the cause of this defeat.[4]

If some of the reports seen on the test of our proposed infantry division are based on fact, troops of that division on several occasions would have been face to face with a Guadalajara had they been maneuvering in the face of a real enemy, because, like the Italians, they committed advancing columns of motor vehicles to within effective enemy range without adequate security.

On the other hand, in the Catalonian campaign which terminated when the remnants of the Catalonian Army had been chased across the French frontier, the Italian light divisions[5] succeeded so well that this experimental organization was definitely adopted for the Italian Army.

Franco's pursuit of the Catalonian Army was an excellent example of all branches—light mechanized, motorized troops, horsed cavalry, regular infantry divisions, pack and motor transportation and aviation—each using its

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[3] Later in Spain he talked to Italians and Spaniards who were in the operation.

[4] The author saw in Spain a number of Italian regimental casualty reports. They showed battle casualties of 30% for officers and 26% for enlisted men.

[5] Each of two regiments of motorized infantry and one of artillery accompanied by motorcycle infantry, armored cars, light tanks.

Japanese Cavalry in northern China. Rough country for children of gas engines

Monasterio's Spanish Cavalry demonstrating cooperation of cavalry and mechanization

powers to make good the limitations of the others so as to move successfully forward over all types of terrain and never allow the enemy to rest, reorganize or settle down in a new battle position.

General Monasterio, who commanded Franco's cavalry, had definite ideas as to what cavalry should be. An old regular cavalry officer of the Spanish Army, always interested in horses, their breeding, training and care, he knew that, after all, the horse is only a means of carrying a soldier and his weapons.

The author's first visit was made when Monasterio's cavalry was occupying a large part of the loop of the Ebro River, the same territory in which the hard battle of the Ebro was subsequently fought. His headquarters were at Gandesa, later the highwater mark of the Catalonian surprise attack across the Ebro. At the time of the author's visit, the cavalry was out—posting and patrolling the Ebro in the same way as the Union and Confederate cavalry often watched a river during the Civil War.

During this first visit, General Monasterio, as on subsequent occasions, expressed himself as strongly in favor of the American cavalry methods of equipment, armament and combat. He said, amongst other things, that he wanted to arm his cavalry with automatic pistols, one for each soldier, as is only true in the cavalry of the United States. Apparently, the only reason he had not succeeded in doing so was because, with the shortage of funds available for the armament of Franco's army and air force, only the most essential weapons could be bought. He emphasized the fact that frequently the opportunity exists for a wide and deep deployment and attack at the gallop in which the automatic pistol is the ideal weapon.

Monasterio insisted that the Western Front with its parallel trench systems had made too many officers forget that in the open, soldiers are only human beings subject to the same demoralization and panic which throughout history have given opportunities to cavalry. Above all is this true when the cavalry attack comes as a surprise, or, when beaten troops are in retreat, worn down physically by the battle through which they have just passed and morally weakened by their defeat. Both the General and his officers recounted numerous examples of successful surprise in the long retreat of the Loyalists in that series of battles which began with the Battle of the Alfambra, and in which the governmental troops were driven from the Teruel—Saragozza—Huesca line to the Ebro and the Mediterranean. Captured batteries, tanks, machine guns and motor transport figured in the booty. In the battles themselves the cavalry had never hesitated to dismount and fight on foot. In the pursuit where the cavalry met machine gun and artillery resistance too great to overcome, aviation, by bombing and dive attacks with machine guns, furnished them the necessary preparatory and accompanying fire.

Each visit to General Monasterio or talk with any of his officers strengthened this picture of a vigorously led cavalry seeking the weak points, the flanks, and the rear of the enemy determined to attack and knowing that its limitations would be augmented by the Spanish aviation and, when nearby, the Italian light mechanized and motorized troops. Talks at various times with Italian cavalry officers assigned for observation purposes to the Spanish Cavalry confirmed this picture.

Franco's resources were limited. In building up his armed forces he linked his efforts to the necessities. Franco had never been a cavalryman. Yet he steadily built up Monasterio's force from one consisting of but five squadrons in the beginning to one of more than fifty squadrons. Amid war, energy and money are not expended for such an expansion unless the benefits and dividends are apparent.

Spain simply proved once more the principle so often proven by warfare; no arm is independent of the others. They are all part of the whole armed force of a nation. The children of the gas engines are not excepted from this rule. They are merely the youngest additions to the family. Each arm has powers and also limitations. The proper combination is that which arranges the whole so that the powers of each offset the limitations of the others.

The Spanish Civil War provides the question: Has cavalry failed in recent years because the opportunity for horsed cavalry has vanished into history with so many military things of the past, or because the type of cavalry needed was not present to seize opportunities which have existed?

Since 1905, in various parts of the world during war times, the author has come in contact with a number of situations in which a properly armed, trained, and led cavalry could have brought about tremendous changes in the situation and perhaps decisive results.

In 1905, while in Southern Manchuria, just before the close of the Russo-Japanese war, he came in contact with a Hung-Huzeh wearing a pigtail, who had constantly raided the Russian right flank and rear with Manchu and Mongolian cavalry. He turned out to be a Japanese cavalry officer who years before the war had been planted in Manchuria to grow a pigtail and build up a corps of irregular cavalry for just this purpose.

In the same year another Japanese, an artillery officer who became quite a personal friend, was sent to support some infantry and field artillery, and hurried to Niuchang to stop a raid by Russian cavalry around the Japanese left flank.

Each of these men was very much impressed with what the cavalry could have done had it been, in each case, sufficiently numerous and properly armed and led by generals determined not simply to make a raid in which they got out as quickly as they got in, but to attack seriously the exposed flank of the enemy.

The last of December, 1925, and the first part of January, 1926, the author accompanied General Kuo-Sun-ling in his campaign to chase Marshal Chang-Tso-ling out of Manchuria. At Tsin-Min-fu General Kuo was decisively defeated. Aside from the Japanese artillerymen and machine gunners on leave of absence who had temporarily

American Cavalry pistol attack

Polish Cavalry. Note lances and absence of supporting weapons, machine guns, etc.

taken service in Marshal Chang's army, the main cause of this defeat was the appearance in Kuo's rear of 20,000[6] Manchu and Mongolian cavalry. This cavalry had marched hundreds of miles in the bitter cold with the ground covered with snow to arrive just at the critical moment when Kuo's main assault had failed. It attacked, mounted, through a snow and dust storm. The author was standing alongside a Chinese Colonel of Field Artillery, when shots and yells were heard in the rear. Almost immediately out of the storm appeared the cavalry, mounted on shaggy ponies at a gallop, flourishing German automatic pistols or carbines. The surprise was complete. The capture and rout of Kuo's army was also complete. Kuo himself was chased from the battlefield and ultimately captured by the pursing cavalry.

All of the Manchurian and Mongolian country is ideal for cavalry operations on a large scale. The horse population exists. The horsemen, trained from childhood, are there in large numbers. All that is needed is trained leaders and modern armament for the individual horse soldiers and adequate support in the shape of mechanized cavalry and aviation to once more make in these regions the same type of history as the Mongol ancestors of the present population made under Ghengiz-Khan.

In 1914, as the first battle of the Marne came to a close and the "race to the sea" was started, the author helped organize the first section of American ambulances to be actually sent to the front. This section in which he was an ambulance driver, joined the British just as they were coming into line in the Bethune-Armentiers-Ypres sector. The entry into line of the infantry and artillery had been preceded by a cavalry fight. Neither side had enough cavalry present to make this fight much more than a clash between two cavalry screens. The British cavalry, from their experience in South Africa during the Boer War, was armed and trained more nearly in accordance with American ideas of the mounted riflemen than was the German cavalry.[7]

All the terrain was possible for cavalry and much of it excellent. The section of ambulances in coming north from Paris had passed over much of the ground covered by von Kluck's right flank in his subsequent advance south, which culminated in the first Battle of the Marne. All of it was good cavalry country. Talks with Britishers who had taken part in the retreat and later talks with Frenchmen who had been with Manoury's Sixth French Army, when it struck from Amiens at von Kluck's right flank, all agreed on this. *Had Philip Sheridan, with 25,000 cavalry, armed and trained according to American principles, been operating on von Kluck's right flank against the Allies, or on the Allies' left flank against von Kluck, the whole course of subsequent events would have been changed*. Operating for von Kluck, such a force could have successfully turned the left flank of the Allies long before the First Marne battlefield was reached. Operating for the Allies, such a force would have gone a long way towards stopping the German invasion before the First Marne battlefield was reached.

In the summer of 1915 the author visited the Russian-German-Austro-Hungarian Front, during the period in which the Germans took Warsaw and Ivangarod and crossed the Vistula, and again when they took Brest-Litovsk and crossed the Bug. On both visits it was very evident that the fronts of each side in this war of great movement were not continuous. It was also evident that each side had in its front many weak spots where determined attacks could easily have punched through.

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[6] The young Marshal, the son of Chang Tso-ling told the author that this was the number. He had no other source of information.

[7] Except for the British mounted infantry, whose numbers were small, no European cavalry in 1914 was armed with the rifle. The supplies of carbine ammunition were small, the number of machine guns very limited, and the tendency existed in general amongst the men and officers to consider fighting on foot not an habitual cavalry method of combat.

There were occasions on which the cavalry of both sides took some advantage of this. One of the more noticeable was when the Austro-Hungarian cavalry, crossing the Vistula far south of Ivangarod, appeared in the rear of this fortress on its lines of communication. There was no doubt that this contributed materially to its fall as, when a German-Austro-Hungarian army corps assaulted the bridgehead, it fell without much resistance. In other words, the cavalry had caused the Russians to begin their retreat before the assault was made.

On the whole, however, Philip Sheridan's conception of the use of cavalry did not exist. If it had, the operations would not have ended with the Russians and the troops of the Central Powers facing each other along the long line from the Gulf of Riga almost to the Black Sea. In other words, one side or the other, and the Central Powers in particular, had an opportunity to have gained a decisive victory had they had cavalry.

In 1920 the author accompanied the Polish Army under Marshal Pilsudsky on its successful offensive against the Bolsheviki which terminated with the capture of Kief. Later the same year he accompanied the Polish army during the last days of their great retreat and throughout the Vistula Campaign which terminated with the decisive defeat of Trotzky's army. The last of these operations which the author accompanied was with General Sikorski when he was sent south and east to try to catch Budenny and his cavalry who were raiding into the Polish lines between Ivangarod and Lemberg. Budenny raided Zemosc under our noses and disappeared. Sikorski's infantry and artillery were not quick enough to prevent this final raid, much less bring Budenny to decisive combat.

The lack of sufficient cavalry to catch and bring to battle defeated enemy forces in retreat was evident throughout the Vistula Campaign. There is no doubt that this campaign, coupled with the expectancy of having again to fight the Russians, was a main reason for the large number of cavalry maintained by the Poles. In 1939, with most of their cavalrymen armed with carbines and lances, however, this cavalry, despite its gallantry, of course could not resist defeat at the hands of the German light and armored divisions supported by aviation. Much less could it meet the regular infantry divisions armed with all types of artillery which make up the mass of Germany's 1939 model army.

What happened to the Polish cavalry, far from being a proof that the days of horsed cavalry are over, support the lessons of Spain. In addition to the poor armament of the Polish cavalry soldier, Poland possessed no large mechanized units. She had only a small number of armored cars or light tanks to assign to the large cavalry units. Her cavalry lacked the antiaircraft and antitank guns necessary for protection against the German mechanized and aviation forces. Her aviation was so weak by comparison with that of Germany she virtually lost the use of it after the first two days. Thus, even had her individual cavalrymen had modern armament she lacked the mechanized and aviation forces needed to make good her cavalry limitations.

Judging from Spain, had Poland's cavalry possessed modern armament in every respect and been united in one big cavalry command with adequate mechanized forces included, and supported by adequate aviation, the German light and mechanized forces might have been defeated.

☆ ☆ ☆ ☆

American cavalry is a powerful combat arm. A cavalry troop has fire power comparable to that of a company of infantry and it is particularly well equipped through its pack animals to keep a large supply of ammunition right up with its machine guns.—General Craig, hearing before the subcommittee, Committee on Appropriations Estimates, F. Y. 1939.

Mental Mobility

By Major James R. Randolph, Ordnance Reserve

Certain branches of the service are characterized by the fact that when things happen they happen very fast. This is true of a cavalry charge, whether horse or mechanized. It is true of aerial warfare. It is true of antitank artillery, and of gunnery against low-flying aircraft. And it is true of certain infantry situations, especially such as will give the maximum advantage to the new Garand rifle.

Men who find themselves with a natural liking for such service sooner or later realize that they possess a special adaptation to it, which is known as "mental speed-up," or "mental mobility." It is a thing you take for granted if you have it. But apparently it is not universal. And it doesn't seem to be a thing that can be learned. You have it or you don't, and that's that.

To a man so gifted, a dangerous or exciting situation appears to be happening as in "slow" movies. The excitement has caused his mind to work much faster than normal, and it also seems to work more accurately. Perception at the time, and memory afterwards, are clear, detailed, and accurate. There seems to be plenty of time to decide what to do. And the principal difficulty in doing it is the "reaction time," or the time required to get an order from the brain to the muscles, of which, ordinarily, man is not aware.

Perhaps a man's first experience with his own mental mobility comes in an automobile accident or near-accident. Perhaps it comes in a fall from a horse. Or perhaps it comes in a fight. In any case, there is that curious impression of things happening slowly, when really they are happening fast, and the still more curious slowness of the muscles to obey.

With experience, however, there comes an increasing self-confidence, and a growing willingness to take the kind of risks in which fast action is necessary to safety. And with a fight in which loss of life seems for the moment worthwhile, there comes also an exalted blazing sensation in the mind that makes one feel that he was born for war, and that anything else is too tame.

Recent literature contains a number of good descriptions of this phenomenon. Robert W. Service's poem "The Coward," in *Rhymes of a Red Cross Man,* is particularly good, and so is Stephen Vincent Benet's description of Clay Wingate's first battle, in *John Brown's Body*.

Carl Akeley, the famous naturalist, once had a hand-to-hand fight with a leopard, and killed it chiefly by kneeling on its chest. He describes the fight in considerable detail. He speaks of it as "long." But an attempt to reconstruct the fight as he describes it suggests that it merely seemed long because his mind was working so fast.

From such experiences our present knowledge of mental mobility has been largely built up. More scientific studies are needed. It is difficult to produce the strong excitement of an actual fight in the laboratory without involving danger to the subject. But mental mobility also seems to function at much lower levels of excitement. Its study at these lower levels may not only prove sufficient in devising tests for the selection of personnel for different branches of the Army, but it may, of itself, yield a great deal of valuable information.

In "ye goode olde dayes" when life was cheap, such things were studied by trial and error. Mental mobility was the chief thing you needed to be a knight, for with charging horses coming together at more than forty feet per second, it largely decided which knight poked his spear through the others guts, or otherwise put him out of action. If a nobleman's son didn't have this useful quality he might get killed in his first fight. Or, realizing his deficiency, he might go into a monastary or else become a priest.

On the other hand, a boy of peasant stock who showed this quality had the way open to him to become a knight. He could capture an older knight in battle and collect a ransom from him. And then he could marry right up into the highest ranks of the nobility. Otherwise there was strong prejudice against intermarriage with a commoner.

From such laws, which in the Middle Ages were developed through a thousand years of trial and error, we can deduce that mental mobility behaves in inheritance as a Mendelian recessive. That is, it seems to be due to the lack of something, even as blue eyes are due to a lack of pigment. A recessive trait will show only if it is inherited from both sides. On the other hand, it may pass unsuspected through generation after generation, for hundreds of years, and then show up when it comes from both sides.

Two brown-eyed parents may have a blue-eyed child, but the reverse is not possible. Two parents of steady peasant stock, in the Middle Ages, could give birth to a son with the mental mobility required to become a knight. But the lack of this quality in a boy of noble blood meant peasant origin on one side or the other. That's one reason priests were not allowed to marry, and it's the reason a girl's genealogy was so much more important than a boy's, for there was no way of testing her mental mobility.

Between wars, in the Middle Ages, the nobility hunted stags, wild boars, and other game that, when hunted with hand weapons, are exceedingly dangerous to men who lack mental mobility. Thus they eliminated, either by death or injury, or by retirement into monasteries, those of their sons who lacked what was needed for war, and this kept the race from getting soft through long years of peace.

Other races that valued mental mobility have devised even stranger ways of testing for it. One of the strangest is the ancient Cretan sport of bull vaulting. Girls as well as boys took part in this dangerous sport. The trick was to stand in front of a charging bull, grasp his horns, turn a somersault over his back, and land on your feet on the ground behind him. The bulls had long sharp horns, and a performer who failed was apt to be horribly killed.

The utility of this sport can be understood when we realize that Crete is an island, and that, once it had reached a degree of civilization that precluded civil wars and feuds, it would be in danger of war only by small sea forces, at long and irregular intervals. In those days an army's strength was measured in terms of horses and chariots. This called for a fighting aristocracy with mental mobility, and bull vaulting was the best way they could think of to keep it up!

Present indications are that there are three classifications, and possibly more, into which human minds may fall, when compared on the basis of their reaction to danger and excitement. The first two may be called *"mobile"* and *"steady."* Below the steady level the term *"scary"* may be used, but this field is very little known, and there may be two or more distinct types.

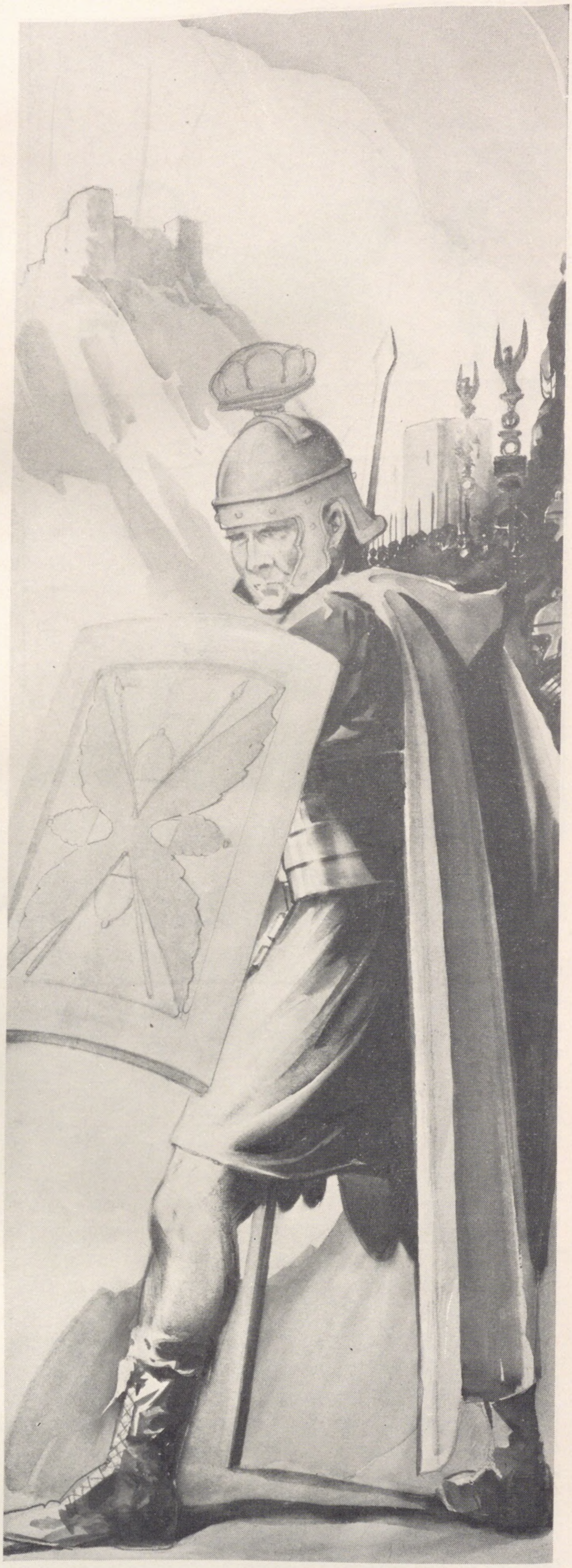
If we could apply tests of mental speed and accuracy, under standardized conditions of excitement, we would probably find the mobile mind improving with the degree of excitement, until a maximum was reached under conditions approximating those of battle. This maximum appears to be about the same for all in this classification. But the degree of excitement at which it is attained, and the relation between efficiency and excitement in the lower end of the curve, may be subject to wide individual variations.

The "steady" mind probably works about equally well under all conditions of excitement, though it may fall off under extreme conditions.

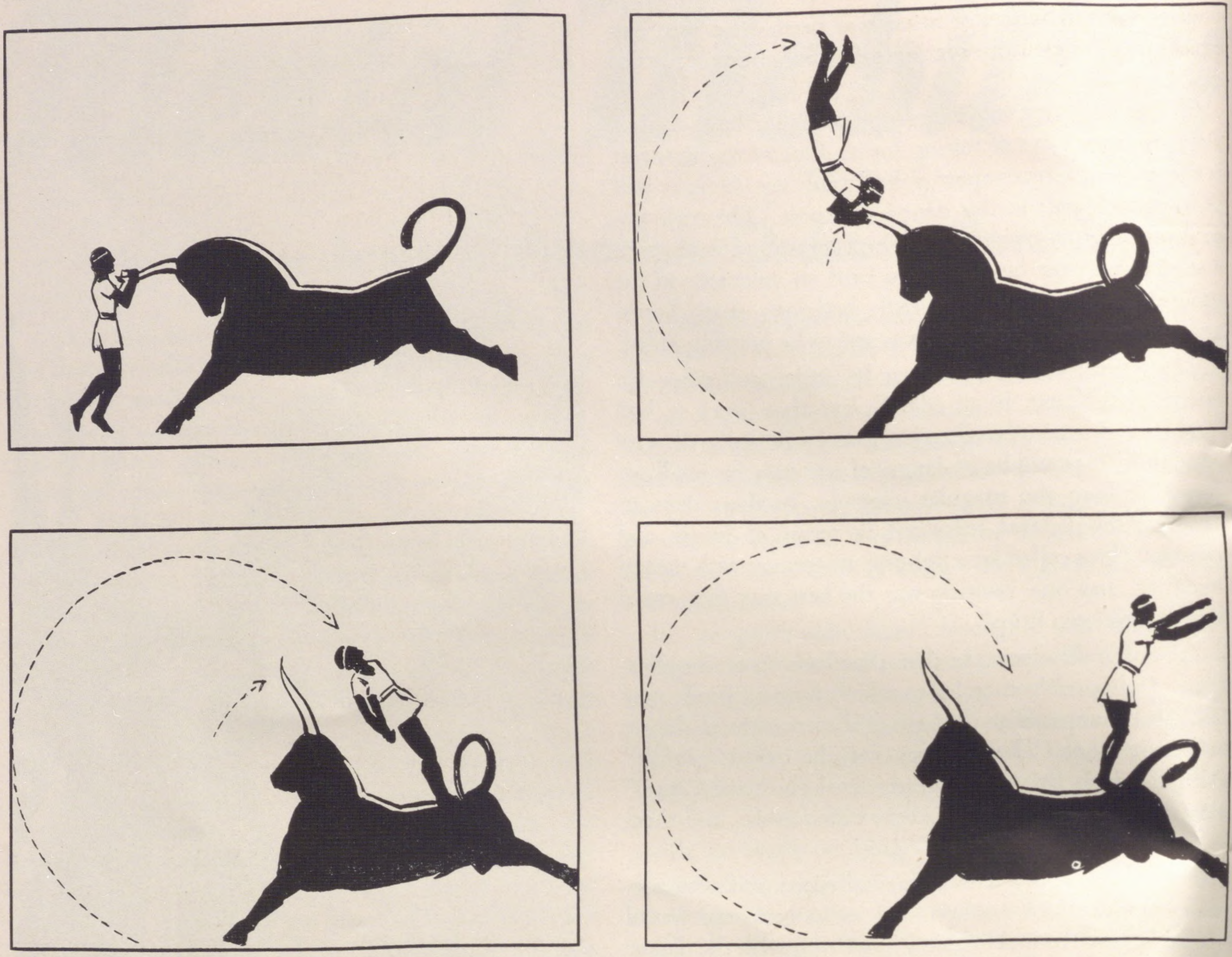
The "scary" mind functions poorly when excited, but there may be two distinct types, neither of which is very well known. Some men find themselves with a strong tendency to run away, like the Negro who said, "Me jine de cavalry? No suh! When de bugle blows retreat Ah doan wan' no hoss gittin' in mah way!" This attitude is common among Negroes, who for thousands of years have lived naked in a land of wild elephants, lions, rhinos, and buffalos. It is an obvious adaptation. But some very brave soldiers have started with that trait.

Other men, when frightened, seem to do foolish things. They "save" china from fires by throwing it out the window. They start panics in burning buildings, and among troops. They swerve their cars wildly off the road, or to the wrong side of the road, to avoid things that never really endangered them anyway.

It may be that anybody does such things in some wholly



Steadiness in battle was vital to success in the Roman legion, but caused the Roman to fail as saddled cavalry



How bull vaulting was done. A performer who lacked mental mobility was apt to be horribly killed

unforeseen and unplanned emergency. Or it may be an inherited characteristic, like mental mobility.

Some rather careful investigation would be needed to decide which. For the mobile mind, and even the steady mind seem to like the idea of danger. Their idle moments are largely given to day-dreaming about dangerous situations, with the result that very few dangers catch them mentally unprepared. Even the Negro mind seems to give considerable thought to danger, and to ways of escape.

The people who act foolishly in danger, on the other hand, show a strong desire to shut it completely out of their minds. And this suggests that their usual lack of any ideas what to do is a result of their realization that they cannot do adequate things, so don't want to think about it.

Study of these scary minds is important. For a country at war or threatened with war may be in as great danger from the indiscreet acts and talk of its citizens as it is from the enemy. Hysterical attempts to "keep America out of war" had a lot to do with our getting into the last one, and with the low level of our preparedness when we got in. Public unwillingness to face the ugly possibilities has had a lot to do with the war now going on, and with our lack of adequate preparation. And widespread public hysteria may cause us to make still worse mistakes than we have in the past.

But in these things the Negro who frankly admits his fear gives much less trouble than the millionaire who tries to make people think he's brave. Perhaps it would help this panicky millionaire, and make him as useful a citizen as the Negro, if he could be taught that panic was an inborn characteristic, and not a thing of which he need be ashamed.

Once he knows that fear clouds his judgment, he could make his plans for deferring judgment, when frightened, to men who do not have this handicap. If that could be generally learned, it might prove the saving of our civilization—if it could be learned in time!

Roman civilization suffered even more than we do today from the political and financial power of men who cannot think clearly when they are frightened. It was an important factor in the collapse of that civilization. And when the Dark Ages ended and civilization began to rise again, we find that all the wealth and power had passed into the hands of the fighting man.

But civilian panic was only a secondary factor in the fall of Rome. It blocked effective action while there still was time to act. It scattered the wealth in useless flight at a time when Rome could still have been saved. But Rome's real failure was a military failure. The panic came because the Army didn't understand this failure, so lied about it. And a knowledge of mental mobility was the thing they needed in order to understand.

The beginning of the end of the Roman Empire came in 376 A.D. with the admission to the Empire as refugees of the entire tribe of the Visigoths, or Western Goths, who had been driven by the Huns out of what is now the Ukraine. These Goths were given lands in what is now Bulgaria, giving their children as slaves to pay for them, and were put on relief until they could raise a crop. But the politicians chiselled on the relief, and allowed the Goths, for a bribe, to keep their weapons. This led to war, and in 378 to the Battle of Adrianople.

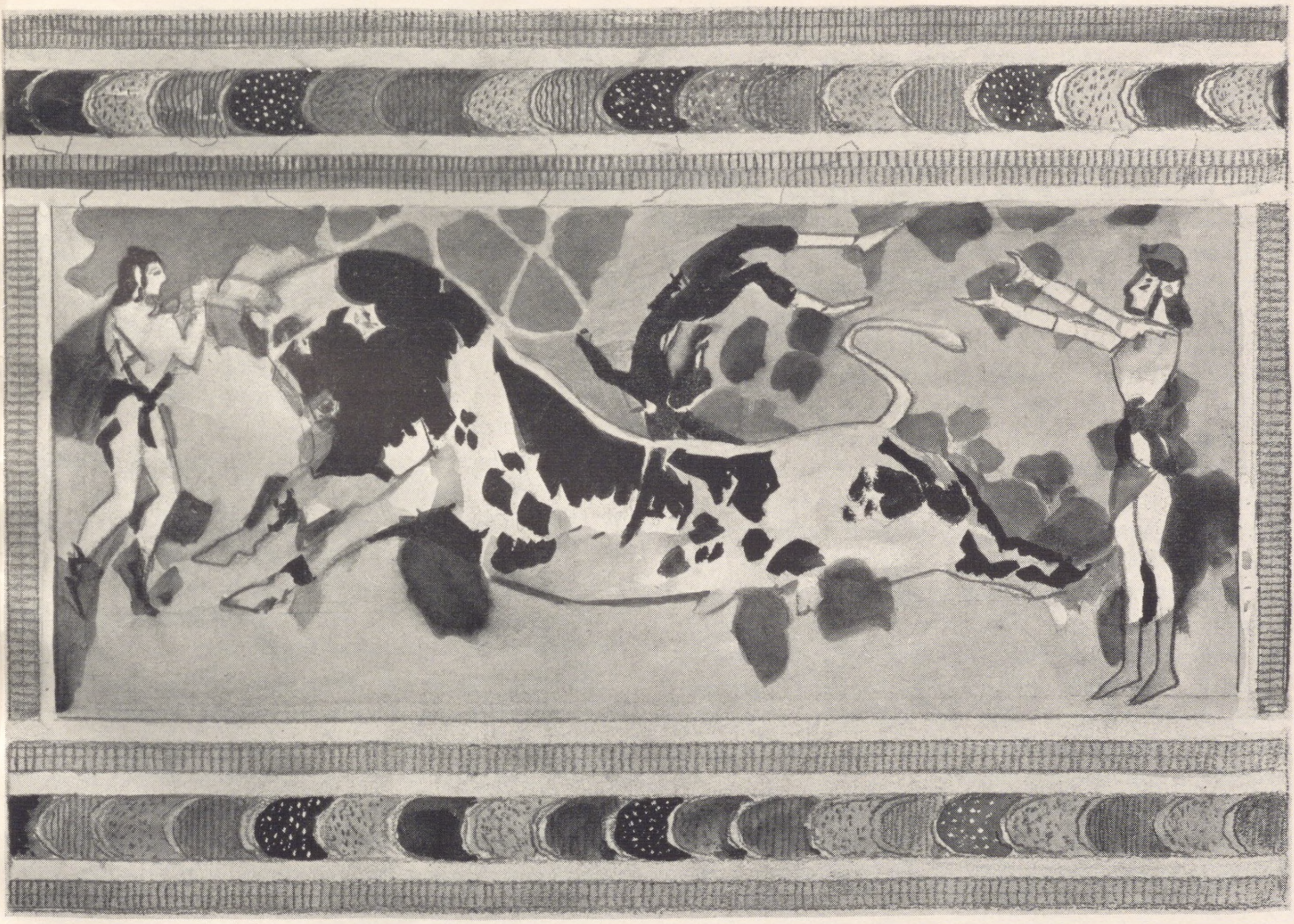
Accounts of this battle differ widely, and seem to be highly colored by the Roman Army's attempts to alibi a failure it didn't understand. The Roman force was probably a legion, of 60,000, led by Valens, the Emperor of the East. The Gothic force appears to have been not over 15,000. It could not have been a large force. For Valens, who seems to have been noted more for jealousy than for courage, did not wait for reinforcements he knew were on the way. And the result was death for him, and for nearly all of his men!

Looking back through the mists of fifteen hundred years, we get the impression that the Gothic victory was due to the use of saddles, which were new in those days. It is obvious to a horseman that saddled cavalry could knock the highly disciplined Roman legion down, whereas bareback cavalry could not. But why couldn't Romans use saddles as effectively as the barbarians could? There seems to have been no possibility of the invention being kept a secret. In fact it may have been a Roman invention. After the battle the Goths and Romans were at peace for twenty years. Goths served in the Roman Army, saddles and all.

But the Romans stayed puzzled and frightened for thirty-two years, until the Goths conquered and looted Rome itself. And then it was forever.

The Roman failure can be understood in the light of what we have told above regarding mental mobility. It is simply necessary to see that the Goths, being horsemen and hunters, commonly had mobile minds, while the Romans had steady minds. Hence when Goth and Roman fought in saddles the Goth saw it slowly and clearly. The Roman saw it as a speedy blur, in which success appeared a matter of luck. But to the Goth it was a matter of skill.

It was this that the Roman couldn't understand, and that the Goth, even if so inclined, could never tell him. They didn't have slow movies in those days, or any other kind of movies. If they had, the Goth might have said "That is how a fight looks to me." And the Roman, realizing that his own impression was so different, would have seen the reason for the Goth's advantage.



An ancient Cretan fresco showing two girls and a boy bull vaulting. In the artistic convention of the time, female figures are white and male brown

Perhaps he could have devised adequate tests for mental mobility, and could have chosen his cavalry on that basis, instead of making it a club for rich men's sons. But it would certainly have helped the Roman morale if the reason for the barbarian superiority had been known. And then they might have devised ways to reduce the saddled horseman's advantage, and restore the fighting power of their infantry.

This was done during the Middle Ages, and an ancient Greek could have told the Romans how. For the weapons of the Swiss pikemen, with which they stopped the much more highly developed saddled cavalry of their day, did not differ in principle from the long spears of the Greek phalanx.

A horse won't run into a spear point he can see. But his eyes are at the sides of his head, and his vision forward is not fine enough to enable him to see a Roman *pilium* before he runs into it. By that time his rider's spear has made contact. But the long Greek spears, with big bright heads, would have stopped the horses in time to break the force of the charge and enable the legion to stand.

This seems to have been generally recognized in the Middle Ages, for laws in most countries forbade a commoner to polish his spear and sword. It has been known in more recent times, as is shown by the bright knife bayonets that came in with smokeless powder. It was known in the west, when canvas corrals were used in horse roundups. And it could have been learned in Rome, fifteen hundred years ago.

The collapse of Roman civilization was one of the most horrible disasters that ever happened to the human race. There was little fighting. There were relatively few atrocities. In fact there is little of horror that shows in the history books, unless you use your imagination.

But statements are made that commerce declined; that roads ceased to be kept up; that the rich men fled, seeking safety in distant lands. And between the lines of such statements we can read the grim truth, of millions dying quietly of starvation and disease because their means of livelihood had failed. And of all this misery the conquering barbarians probably didn't know!

When the Goths looted Rome in 410 something like half the population of the city was on relief. Thereafter relief simply stopped, while the Goths, tiring of city life, loaded their wagons with portable treasures and rode away. Most of the barbarian tribes that invaded the Roman Empire were Christians. Their numbers were small. And the suffering they caused seems to have been due less to natural cruelty than to their lack of interest in city life, and their lack of capacity to manage large communities.

Roman Christians called non-Christians "pagans," which means villagers. But the barbarians, themselves preferring villages to cities, called them "heathen," or dwellers in sub-marginal lands.

And this liking of the barbarian for country life, with its occasional fights, its hunting, and its long periods of quietness, is also characteristic of the man with a mobile mind. His mind reacts to excitement, even to mild excitement, so intensely that he cannot stand it as a steady diet. He has to have it in big concentrations, with long rests between. And as he changed Roman civilization so as to give him such a life, the millions on relief, and the millions of workers he didn't need, had to die. They were not useful to him. And they were helpless to fight him, once he had knocked the legions down.

The saddled horseman introduced to Rome a social code that we now know as "chivalry." The word comes from the same root as cavalry. And one of the characteristics of this code is its elaborate precautions against the commoner types of quarreling between husbands and wives, such as frequently leads to divorce. If a barbarian woman thought her husband was unfaithful she didn't quarrel with him about it. She told her brothers! This custom, which is still largely observed among descendants of the medieval aristocracy, means at most a fight. More usually it means a calm and fair trial, between man and man, and the whole thing is quickly settled.

Chivalry also protects the beaten man from such prolonged bullying as in international affairs has now brought the world to another war. It creates a prejudice in the winner against leaving hatred behind. But the motive is not wholly altruistic. For it lessens the winner's future worries. All through this code, all through the medieval ideas of courtesy that have come down to us we can trace the efforts of the mobile mind to save itself from trivial and chronic sources of worry and excitement, and to concentrate its attention on a few big fights.

We could go into a good deal of detail here, comparing the social code of the saddled horseman with the more modern codes that have grown up independently in the business aristocracies of America. For the business aristocracy, with its steady effort, favors the steady mind rather than the mobile mind. Descendants of the old fighting aristocracy of the Middle Ages can make good in modern business if they can plan their social life to suit their natures. But the two do not mix well. The mobile mind wants a leisurely quiet society. The steady mind wants a busy whirl. And the scary mind wants huge amounts of second-hand excitement, which it seems to use as a recreation.

Such differences may prove important in helping a family to maintain a high rank for centuries, instead of the all too common "three generations from overalls to overalls." In the mixed heredity of today they call for great tolerance. For mobile minds may be born into families of steady minds, and vice versa. And failure comes where the significance of this is not understood.

Moreover, the mobile mind can often win a conflict that isn't too prolonged, simply because of its ability to do several hours' work in one. It may win a contest for a job, and then fail through setting a pace that cannot be maintained. It may win a contest for a fortune, then fritter it away. Thus the blood of saddled horsemen, coming into a family of modern business men, may conquer fitter blood and then destroy the family, if its action isn't understood.

Such considerations led to the prejudice among the medieval aristocracy against "engaging in trade," and against manual labor. The Roman aristocracy does not seem to have had that prejudice, any more than a modern business aristocracy has.

Also, there does not seem to have been, in the Roman Army, that distinction between commissioned and enlisted personnel that modern armies inherit from the Middle Ages. That distinction grew up in an age when the officers were horsemen, and needed mental mobility, while the peasant-born foot soldiers didn't. It meant that the mobile mind was not in direct command of troops. And this distinction means the most today to officers having mental mobility.

Officers of steady temperament, on the other hand, seem to regard this distinction as a vestigal organ. Some of them seem to think it a good idea for a soldier to start as a private and work up through all the grades. And that idea seems to have been general in the Roman army too.

Such steady officers seem to be best, in general, for command of large organizations, and especially where the duties to be performed are such as can be planned in advance. But the mobile mind, if it doesn't throw subordinates into a panic, is much better able to improvise.

Thus where an army commander has the responsibility for distributing duties among officers, some having mental mobility and others not, he should put the mobile minds where unexpected kinds of attacks are likely to be made, or where unexpected opportunities for progress may develop. The jobs that can be planned and practiced in advance are better for the steady minds.

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POUR LE SPORT

The Duke of Wellington, during the Napoleonic wars, had his own pack of hounds kenneled behind the lines and followed them in his spare moments. On a day in the autumn of 1811, hounds ran straight across no-man's-land and behind the French line. The huntsman, remarking, "Where my fox goes, so do I," followed and killed his fox amongst the astonished French cavalry, who took him prisoner. They released him next day, however, and conducted him back to the British outposts, complete with his pack.

—MAJOR A. J. R. LAMB, *The Story of the Horse* (Maclehose).

A Military VACUUM

By
Major J. Halpin Connolly

Unquestionably the Army displays an abysmal ignorance of the intangibles that actually make a military organization. Such words as discipline, morale, and leadership are used continuously, for they are the core of war-making. Yet no general understanding of them prevails. No precise and accepted definition of them exists; no knowledge of their derivation and growth is extant. Yet the learned, pedantic military writer patters in an abstruse way about such things. Perhaps he may have his own definite idea of the qualities and how they emerge and grow. But perhaps his readers have other ideas, vague, nebulous ones, or perhaps none at all. And furthermore, the writer may be wrong. Therefore we are not dealing with factual matter but airy ideas, and to top it we allow our regulations to ignore or befuddle such basic military factors. All this despite the fact that science can give light on these matters.

Yet how these intangible qualities are derived, from what they spring, what actually is this very substratum of an army from the squad up, has been blandly passed by. What is military discipline? one may ask, and undergo a deluge of definitions. How can one go about instilling it? And then in all likelihood one will get the old worn yet calmly accepted explanation that it is "based on hope of reward and fear of punishment." What a futility! What error! Frankly, such a method does not produce military discipline or anything worthwhile. It is but the basis of prison discipline.

It is such an iron rule that governs Alcatraz or Atlanta penitentiaries. But the people incarcerated never become soldiers. A little lack of vigilance and a prison may become a howling inferno where death stalks and the directors fall. It has happened often. These men are not soldier material, some may say. But be cautious here, for the cases are many where such people in a wartime military organization have gone out to battle. They followed their leader to the very point of death and did not shoot him down as in prison because the meals were poor or freedom was denied. Yet there is no freedom when moving into battle, meals are sparse and sketchy, and death is ever-present.

What reward or punishment governed Napoleon's Old Guard at Waterloo? There, with the French force in a rout, the Guard stood staunchly and refused to lay down their arms. Their case was hopeless, but to the English demand their reply was, "The Old Guard never surrenders." There they stood rocklike until volleys of musketry fire laid them all low and something of great worth—a rare, exquisite, human feeling—passed away in the smoke of the muskets. The origin and growth of this feeling, its development within the breast of man, the method of inculcating it and using it, is of far more importance to the soldier than all study of the Napoleonic era. For warfare today is vastly changed and it will keep changing. Man alone in the kaleidoscopic whirligig of modern times is static. But at least all should know this: Soldiers are not the product of prison methods of discipline. Strange, we do not preach or even admit that.

What punishment could the military give that was greater than the death that faced the Guard? What reward could be conferred on these individuals in the hereafter? Since when did the military parade ghosts and give them the reward of medals and honorable places in Valhalla, Elysium, Nirvana, Paradise, Heaven—call it what you will? Again, what about the Spartans at Thermopylæ, the men of the Alamo, and countless other groups who have brightened the drab history of war, gave it a coruscating light and left a precious memory in the world? They showed us the greatness that lies in man; they should make us humble, for very likely we lack this greatness of spirit—and so does the unit under us. But at least we can and should study such matters and discern how they develop. Yet we do not. The worst blunder of all is that we soldiers have little sound material concerning this aspect of war-making. Where is our literature about it? It is slender—and who knows if any of it is true? We will spend pages discussing river crossings and blandly wave aside in a few words one of the very fundamentals of war—discipline.

True, there is no question that in peacetime one can run a unit on a reward-and-punishment basis and one may obtain a snappy outfit that appears admirable. But this surface glitter will always lead one astray, for such units will not be fit for combat. Despite smartness they will lack the deeper spirit, the inner grimness, something, that enables a unit to fight its desperate way through battle which is harsh, slimy and revolting—nothing very glorious about it. For instance, the smartest and best-rated corps in the Army of the Potomac—judged so after a whole winter of observation—failed miserably at Chancellorsville. It broke wide open and fled. Were these surface results so noticeable in the corps produced by the application of reward-and-punishment? Who knows? But in any event the high command was sadly deceived about this corps. It could not judge the moral and disciplinary qualities of troops. And who can lay down the specifications today that will help in judging any war-making body? Check all the books and see how little we have. Check the regulations that are skimpy and filled with old saws, aphorisms, and unctuous, erroneous thoughts.

In fact, the military neglect almost completely a study of this phase of war while it muses on the intriguing geometry of battle which changes as new weapons come in. From all this the scholastics try to produce an esoteric literature of physical war to the neglect of the human and unchanging element of war. Knowledge of discipline is an intangible something desperately needed, to be sure, but so far as our military culture is concerned it is not studied nor written about extensively so all might benefit. Frankly, there is a basis of science for these intangibles of war; the rest of warfare is an art. To be brutally frank, we airily ignore what science can give us and like dilettantes play with an art—and an archaic art.

We have become so awry in our thinking of discipline that if a higher commander directs that "disciplinary action be taken," the subordinate commanders hastily ladle out punishment. Actually, the lower commander could in response and in all justice pass out a commendation. But memory fails to recall one that did, because we have actually tied up discipline with punishment. Yet, the two do not belong together—except in prison.

Morale—another word denoting an intangible human quality—is just as little understood. How is good morale produced? What must commanders do to obtain it? How can we judge it? Frankly, we know little of it except that it often exists and is militarily indispensable. Good leadership produces it, it is often said. Quite true. But what is good leadership, how is *it* developed and applied? Here is another intangible that can be recognized, but how it acts is so difficult to analyze that little valuable has been written about it. Morale and discipline both depend on this leadership, it is said. So what have we got? Nothing but a piece of circular argument. We are still among intangibles. We explain one by quoting another. The military are scholastic thinkers, not scientific ones.

At the same time our schools insidiously and unconsciously indoctrinate the students with error about the intangibles. For instance, in a problem they state a certain unit has lost a meal, therefore their morale is low. This is wrong. How did Lee's army fight its terrific battles of the latter Civil War with little to eat? Study the Wilderness battle—Spotsylvania. If Lee's men had poor morale let's hope our army always has it. Another example is to quote that an outfit has marched a great distance and therefore their morale is low, or is not excellent. Wrong again! A corps commander once marched his corps seventy-seven miles in forty-four hours. With five hours' rest he was placed in the battle line by the commander in chief exactly in front of the enemy's main blow. His corps fought like tigers despite their march. Their morale was so high that notwithstanding the fact that they were forced back by sheer weight of numbers, they clung tenaciously to positions. This morale was almost exalted. But it should be noted that this was a battle, not a map problem. If one thinks that this is sheer lunacy in war, it would be well to mention that the corps commander was Marshal Davout, and the battle was Austerlitz. Certainly Napoleon knew what morale was. It was not vitally necessary to place Davout on the line. He had other and fresher troops to go there and reserves aplenty. But Davout went in to meet the main blow—Davout, the backstairs, untried, waltzing marshal. The scholastic soldier would hand out a U for that. Napoleon won a battle with it. Take your choice.

Frankly, we think that any discomfort always lowers morale. This is not so. It is almost as great an error as the wartime custom of appointing a morale officer to pump morale into the troops—with mass singing, motion pictures, and dancing girls. If there is anything more ridiculous than this, it is hard to say what it is. Morale comes from the leadership of the commander and no one else. For the high command to believe that the morale procurement could be passed on to a staff officer and for local commanders to placidly accept this condition without a howl of rage, indicates clearly that all know little of morale. One cannot requisition it.

Frankly, all these events disclose one thing; and that is, we know nothing of morale. Yet it is a word that is often used. We can tell after a battle when one side has shown good morale, but how to judge it beforehand and how to produce it, both are beyond the ken of all except the good leaders. To try to judge such a subject is futile, for our standards mean little. All this because too little study has been given to the subject, and less is written. The core of a military organization is morale, leadership, and discipline. These things need far more study than river crossings, wide envelopments, or the like; for the whole game of war rests on these intangibles. Strange, we do not go into them more. Certainly it is true that "the moral is to the physical as three is to one." But knowing that means little; knowing what this morale is and how to arouse it and develop it, means everything to a soldier. The same goes for the other intangibles called discipline and leadership. It is time we ceased memorizing and muttering old saws and maxims and start the study of the foundation of an army.

To indicate how much we skip in the study of war, it may be well to mention a certain general. He never flogged his troops for infractions of discipline, yet all other armies did—even our own. Often at night he used to wander between the campfires after he had finished his work. With the soldiers seated about the fire he exchanged stories—salty ones no doubt—and roared with laughter. But the strangest of all things was that he granted corporals and sergeants permission to try any of their number who was deemed guilty of a dereliction of duty. The officers did not have to worry about that. At inspection any soldier might have a written complaint or request stuffed into his musket barrel. It was extracted, read by the general, and action taken immediately. Money might be given, or a sword awarded or a promotion made on the spot. The soldiers had no hesitancy in writing direct letters to him, and often received a complimentary reply in the general's own handwriting. Once when going into action with a large army he himself actually helped his artillery by doing a private's job.

Certainly some or all this is queer to us today. But if this man was good and had a good army, then some of our feeling of queerness is born of a defective military idea of armies of war. Flatly, it can be stated that this soldier built and led a superb army. His victories were stupendous and his military stature has never been exceeded. His name was Napoleon.

The queer thing is not what he did, but our lack of study and understanding of this aspect of his work. We ignore that completely. Hence we cannot say what things he did that were wrong and what were right. Let us be honest—we don't know. Those who think they do are doctrinaires, not thinkers. Oddly, it is useless to follow in his tactical steps, for war has changed immensely; but to follow in his steps in the handling of men—there is something to think about. Napoleon had something of superlative merit in this field. What was it? We do not know. We do not study it.

One can get a precise and exact story of how he fought the battle of Jena, and adjacent Auerstädt, and then rolled over all Prussia in less than a month. But—Napoleon was mistaken about the Prussians; he did not fight their main body as he thought; his scheme was entirely awry and Bernadotte's corps, though on the line, never got into action. His plan of battle was a masterpiece but it did not work. Something else won. It was Davout's corps fighting like demons against a huge main force that won Auerstädt, connected it with Jena, and brought on the Prussian debacle. What we should strive to know is not the geometry of the battle—it was all awry anyway—so much as why the soldiers of Davout smashed up a much larger force in a straight slugging battle. They had morale, battle discipline, and Davout was a great leader. Granted. But what made this morale, battle discipline, and leadership? And why was it the Prussians did not have it then? They did later. This is the subject that should be getting laborious study but instead we hear only prattle of Napoleon's genius and Davout's leadership—both are regarded as unexplainable. The military are worshipers at a veiled shrine of mysteries instead of students of human action. Yet there is no mystery here; hard study of years will give us the answers. But we would rather play with battle geometry. It gives such lovely pictures.

Times change, people change. Thus the culture that produces soldiers needs study. True, all men are essentially alike, but each generation, each nation, shows a change in soldiers as the people's society changes. It is not a change of the primitive man but the culture which calls for a different approach to the man. Today in the mechanized age the rapidity of change is breath-taking; stupendous is the speed of change. There has been nothing like it in all the world's history. And we do nothing about it. We make no study, we do little thinking. We accept the past and if anything is likely to be wrong that is it. For the past is good only in telling about the *primeval nature* of man, not his complex civilized nature, which is the product of society—and society always changes. Who can tell us the difference between the Civil War and World War soldier? There was a difference but just what was it?

We should be studying, delving into the world about us and the soldier material civil life is turning out. The man that walks the street is the one who will make our war army. Never forget that. It is he that should be studied. How can he be led, how disciplined, what produces morale? Do not try what has happened in the past or very likely we will be wrong. Study the subject scientifically. There is material turned out on it.

One great project entirely controlled by the military should be extensively and scientifically studied. That is the Civilian Conservation Corps. It had no *standard* military discipline but it ran like a piece of great machinery. Things went smoothly despite the fact that nothing in the army's past was utilized to inculcate standard army discipline. What kind of discipline controlled 300,000 men? How was leadership promoted? What made a leader? The very least we can say is that all was quite high. But how was morale produced and kept on a high level? Finally, could military instruction be introduced and succeed, using the same type of discipline and leadership? If this could be done, then we have struck something of tremendous military value. Even if certain slight changes are necessary, still we have found what the common American desires, what he will work under with great good will, what is the method of group discipline, leadership and morale common to Americans. That we do not know today. We let it pass. In military life we have copied too much from abroad. Yet we are a different people. Foreign material does not fit us.

There may be gold in this CCC hill. Why do we not study it to find out? Good or bad, it needs intense studying, as do other mores of American life. But no such studying is given in any of our military schools. It appears we are but a bookish soldiery that studies old and outmoded things.

Some may scoff at such study of modern trends because soldiery has always been the same. They may enjoy their chuckles now, but as commanders in the next war they will be old, querulous, and valueless. Chalk that up.

Democracy and Discipline

By JAMES ANTHONY REILLY

An army must reflect the people from whom it springs. It must reflect the character and customs, institutions and traditions, likes and dislikes of the people, else it will not be on a sound foundation. Few of these things will prove obstacles to the war efficiency of an army if properly exploited. The successes of great military leaders were due as much to their knack for exploiting the native characteristics of their soldiers as to their administrative, strategical and tactical abilities.

The most exhaustive study of a campaign or battle is superficial if it takes into consideration only the physical, for the moral is usually the decisive factor. Nor is it enough to ascertain that the victorious force was of "splendid morale" because their stomachs were full or they despised the enemy. An analysis of the moral factors of a victory must delve into the national life, the army's system of discipline, the suitability of weapons and tactics to the native genius. The quality and the type of leadership must also be considered. Then, perhaps, the spirit that pervaded the victorious army can be seen. It should be studied closely, for it is the real root of the victory.

Next to the character of the national life, the discipline is the most powerful force in determining the spirit of an army. But what is discipline? Definitions differ widely. One is that discipline is fear: the soldier must fear his officers more than he does the enemy, else, we are told, he would not go into battle. Another definition is that discipline is simply habitual obedience and can be instilled by continual drilling. Obviously both are of ancient vintage and clearly picture the dull-witted peasant soldier. They also assume a milder form of warfare. Rapid-fire weapons ended the era in which the precision and unthinking obedience of the drill field could be used on the battlefield; and certainly no officer can be more fearful to his men than the roaring hell of modern battle.

Yet the system of discipline in many armies today is based on this premise of the past. In most cases it does not allow for the rising educational level of the masses from which the soldiers come, and is needlessly irritating. Strict discipline is necessary, *but it should be confined to essentials*. Accompanied by a lot of farcial fuss and feathers it can be as detrimental as poor discipline. It should be fitted to the temperament of the people, and follow as far as possible the lines of the rights and restraints in the civil life of the nation. Thus the discipline in the Grand Army of The Republic and the Imperial Germany Army were of opposite extremes. Judging on manifestations of discipline alone, a soldier of the Kaiser would not consider one of Grant's boys a soldier at all, while the latter would class him as a combination prisoner and flunkey. Yet each represented a fine fighting force in which the discipline was well adapted to the psychology of the soldier.

The average Civil War soldier was a rural boy accustomed to doing his work much on his own initiative; independent, patriotic, democracy-conscious. He was jealous of his liberties, proud of his individuality and naturally rather hostile to authority. The light discipline and friendly relations between officers and men suited his character and did not lessen his fighting ability. In cases where the latter proved to be of a poor grade it was due to his lack of combat training and the ineptness of his amateur officers, and not to the system of discipline. There is much significance in the fact that the actual system of discipline that developed in these American armies under the stress of war was quite different from the theory of discipline then promulgated by the War Department.

The pre-1914 German was a militaristic royalist to whom subjection to superiors was a source of pride. The discipline in the Imperial German Army exploited this by making every officer a little king and his soldiers his subjects. Like the discipline of the American Civil War armies it was successful because it reflected the national character. It is significant that a few years of republican government brought a new conception of discipline to Germany. Today, even under the totalitarian government, the discipline in the German Army is more democratic than that in any other army except the French.

The changing times have changed the German people and the army has wisely changed its discipline accordingly. This period has also brought widespread changes in American life and thought. The potential soldier of today has an attitude and outlook that is a great deal different from that of his AEF father. Has the discipline in our Army changed with the changing soldier material?

How does the modern young American differ from the soldier of the AEF? What changes must we make in the system of discipline in order to exploit his characteristics? These are questions we should be asking in this transitional period of the Army's development. Never in the Army's history was so much improvement under way at one time. New divisional and regimental organization, improved ordnance, new tactics, drill and even uniforms have all made their appearance in the last few years. These things, and the current expansion and equipment program, assure that the Army of 1940 will be more different from that of 1935 than the latter was from that of 1910. But, except for a few voices in the wilderness, there seems to be little thought of modernizing the discipline of the modernized army to fit the modern American soldier.

The backbone of discipline is obedience, and with obedience there can be no compromise, under the guise of modernization or anything else. The superior must have the prompt, complete and unquestioning obedience of the subordinate. But because obedience must be unquestioning does not mean that the soldier need know nothing more than his orders. The unquestioning mind of the simple soldier of the past is not to be found in our modern American soldier. Education has taught him to apply the eternal "Why?" to everything. "Their's not to reason why, Their's but to do and die" is not for him. The only way to utilize this trait is to give him some knowledge of the purpose of every mission, thereby increasing his sense of personal responsibility. In his critique of the First Army Maneuvers, Lieutenant General Hugh A. Drum said: "Given a definite objective and simple reasoning for a desired action, the American soldier will excel all others in his response and efforts." Giving him the reasons will also appeal to that spirit of coöperation which business methods, athletics and other forces in his pre-military development have given him. The intelligent and aggressive action that will result will be far superior to the automaton-like performance disciplinarians of the old school advocate. Every effort must be made to free the soldier from any impression that all he can do is go through the mechanical function of obeying orders and that everything else depends on some mysterious military magic known only to officers.

Fortunately a greater realization of the value of the intelligence and initiative of the individual soldier is growing in our Army. In this we are at last breaking away from the old European systems on which our theory of discipline has been based since von Steuben's time, and toward a thoroughly American system. But we still hold to many principles and practices of the former. The various European systems have much in common. They are all based on the peasant soldier-aristocrat officer premise, naturally have many aspects not suited to modern armies, particularly those of democracies. Yet tradition preserves these things in all armies, including our own. The sections of Army Regulations covering Military Discipline and Courtesy are full of them.

They irritate and antagonize the soldiers, particularly the civilians in uniform that constitute the bulk of our wartime armies. We cannot lead a wartime army with a civilian system of discipline, but neither can we completely free the emergency soldier from his civilian outlook. This was noticed in the World War by a young National Guard lieutenant whose perception and understanding have since made him one of our leading novelists. In his account of his war service, one of the best of the war experience books, he wrote ". . . to the Americans, war was a business enterprise on a national scale with life insurance, union wages and shower baths for the employees. Occasionally one met a genuine soldier lost amid regiments of employees."[1]

Every effort must be made to make the regiments of employees into soldiers, but care must be used in the little things. The methods must be military but not militaristic, for America has fought militarism and possesses a pronounced aversion to militaristic methods. This aversion cannot be exploited if the soldier finds in his own army many aspects of the system the traditions and training of democracy have taught him to abhor.

Army Regulations say, "Courtesy among military men is indispensable to discipline." That is indisputable, but many of the forms military courtesy takes are not indispensable to an American army. Courtesy is also indispensable in business and social life yet we do not find these spheres of our national life observing the archaic customs and ceremonies of the more pompous past.

The use of the third person in addressing officers, excessive saluting, unnecessary brusqueness of officers and a few other such trifles do more to unpopularize military service in this country than the dangers of the battlefield. The civilian soldier serving his country in a national emergency does not understand why he should be humiliated and degraded. He considers most of these practices assaults on his pride and self-respect and all the lectures to the contrary that can be poured into his ears will not change his opinion. Even the peacetime Regular resents these outmoded trimmings of discipline. He reconciles himself to them but nevertheless resents them.

Many World War veterans seem scornful or bitter toward their former officers, yet a little questioning usually elicits the private opinion that they were really pretty good fellows. It is the system that these veterans are bitter toward and the officers are still, to their minds, the personification of the system. What the result of this dissatisfaction might have been if the AEF had been forced to go through four straining years of war like the European armies, is a matter of conjecture and an unpleasant thought.

A modern American wartime army would probably react unfavorably to these same conditions much more quickly than the AEF, for the post-war generation is less disciplined, accustomed to greater freedom of thought and action, more conscious of its "rights." As we cannot remould the generation we must meet its characteristics with the necessary reforms. We require of the soldier obedience, respect for superiors, a high sense of duty and contempt for danger. National, organizational and individual pride are also desirable for morale. The trimmings of discipline contribute nothing to the cultivation of these qualities, and he who thinks otherwise does not know the mental processes of the modern young American. He should eavesdrop a little on soldier conversation.

There are many who believe these things to be the very essence of everything military. This shows the influence of that enemy of progress, Tradition, on military thought. These customs are traditionally military but superficial at best, and in this country seriously detrimental to national defense. That practical, cynical young man, the average American potential soldier, has an unconcealed contempt for the superficial or artificial and a quick recognition of the ridiculous. Properly handled, he will make the best educated, most adaptable, skillful and enthusiastic soldier the world has ever seen, and rates more respect from his officers than the peasant soldier around whom the systems of discipline of the world's armies have been built.

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[1] *Toward The Flame* by Hervey Allen.

Junior officers cannot be too firmly impressed with the necessity of showing proper respect for the soldier. The Regular officer of most recent commission understands this, but it must be remembered that after M day the majority of captains and lieutenants will be from the ORC and most of them fresh from a soft, safe and sedentary life. Many of them will be mixing with rougher elements and wielding authority for the first time and it will not come easily. Others will be inflated by their little bars and will launch careers of cockiness, officiousness and petty tyranny that will make every soldier they contact hate the Army. These young officers of little military background must be taught to be confident but not conceited, considerate but not condescending, stern but not stilted.

Fine examples of natural, American discipline with mutually respectful relations between officers and enlisted men can be found in most of our National Guard regiments. We can learn many things from the National Guard, for it is an integral part of the national life, while the Regular Army is a community apart. The guardsmen closely approximate in training, skill and outlook, the millions of civilian soldiers who will face the enemy in war. And unlike the Regular, the guardsman is not provided with economic security; military activity itself is the sole attraction. Consequently the officers must make military service agreeable and popular as well as interesting. Here lies a valuable lesson, for if we are ever to achieve a truly great army we must popularize it far beyond the present conception.

A European disciplinarian would be appalled by some of the customs and conditions in the National Guard and would rant of the "lack of discipline." Hearing soldiers referring informally to their company or battalion commanders as "Captain Tom" or "Major Joe" he would throw up his hands in despair. But the young American is not a formalist and cannot be made into one. He will have more genuine respect for a hard but affable Captain Tom than for a Captain Percivel P. Picklepuss.

To make military service attractive and popular, and build a great army, we must free it of the irritations which are objectionable to American concepts, but for battle efficiency we must have a genuine discipline of a high order. These two aims are not antithetical, for a strict and sound discipline is possible without the trimmings toward which the democratic spirit is hostile.

And we must relieve the drabness of life in the great cantonments of wartime. Baseball and movies are not enough, for these are not of military character, and it is the military side itself which must be made popular. Nothing can equal the baton in the knapsack for giving the soldiers lively military interests, but commissioning from the ranks will have to be much more common. Even those in the draft must feel that they have a fair chance for a commission.

Much can be done with bands, banners and bugles to touch the imagination of the civilian soldier of wartime, and the unimaginative utilitarians who scorn these things have not studied the basic weapon of war—man. Military glamour, glory and greatness have been the food of armies from time immemorial and the American soldier will thrive on it as well as the soldiers of Caesar and Napoleon.

Exploit his natural American competitive spirit by convincing him that he is a player on a team of mighty millions engaged in a bloody, brutal contest with a terrible toll for defeat. This will bring to the battlefield the initiative, teamwork and the will to win of the athletic field. Much can be achieved by tapping his great capacity for coöperation. Coöperation, not coercion, and American democracy, not European tradition, must be the basis of discipline in our Army if it is to reflect the people from whom it springs.

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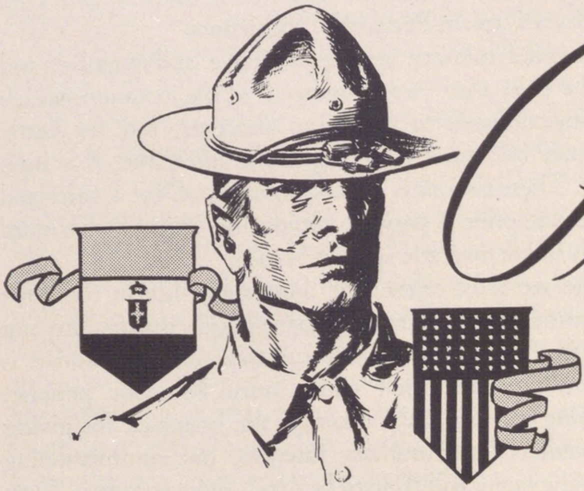
ESSENTIALS OF LEADERSHIP

I consider the following attributes as the essentials of leadership that go to make division and corps commanders. It is difficult, if not impossible, to arrange them in order of priority.

(1) Force of character
(2) Physical fitness.
(3) Knowledge of one's profession, of men, and of self.
(4) Courage, both physical and moral.
(5) Common sense and judgment.
(6) Tenacity of purpose.
(7) Executive ability.
(8) Last, but not least, that intangible something known as personality.

—Major General H. J. Brees, U. S. Army.

THE CASE OF Private Galli



By Peter B. Kyne

During the Great War I found an Italian-American youth, whom I will call Benvenuto Galli, enlisted as a private in my battery. When we had been in the service about two weeks he came to my tent one day, drew himself easily and naturally to attention at the entrance, saluted me without a snap, old soldier fashion and said:

"Sir, Private Galli has the permission of the first sergeant to speak to the battery commander."

"You may speak to me, Private Galli, but before you do I want to ask you a few questions. Who told you to ask the first sergeant for permission to speak to me? Who told you it was the proper thing to ask the first sergeant? Who told you, when you approached an officer, to halt at six feet, come to attention and salute? And who taught you how to salute like that? I know I didn't because I haven't had time."

"Why—why," Galli sputtered, "I been in the service two weeks now an' I am not dumb. In two weeks I must learn something, sir."

"You have a remarkable brain, Private Galli. According to your service record you have never had any previous military service."

"Ho," said Galli, "so the captain thinks I am a blue-bird, eh?"

"The captain did and he still does. Do not be afraid of me, Galli. I'll not expose you. What outfit did you go over the hill from? Nobody in this green outfit with the exception of the first sergeant, you and I know what a blue-bird is. Come clean!"

"The Fourth Field Artillery, sir," came the prompt reply, "but I didn't go over the hill. I was discharged on S. C. D."

"Oh, so you're a cripple, eh?"

"Oh, no, sir. Cripple?" He laughed softly. "I can run a hundred yards in ten seconds."

"Ah, tuberculosis, then—and you've since cleared up?"

"No, sir. They gave me my discharge for epileptic fits."

"Well, Galli," I informed him, "I can't cover up epileptic fits, so the first time you throw a fit in this outfit you'll be headed back to the place where they feed you spaghetti and red wine daily."

"There will be no epileptic fits," he assured me gravely. "I never had any. They were—er—ah—"

"Simulated," I interrupted, supplying the good old army term. "Why did you simulate epileptic fits?"

"We were in Texas, on the border in 1916. I was hoping for a war with Mexico but all the fight I got was with jiggers and sandfleas. It was hot—ah, captain, that Texas is a terrible place. I was most unhappy. Then one of the boys had an epileptic fit but we covered him up for two months before the first sergeant found out. Oh, many times I saw this fellow have a fit and when they give him an S. C. D. I said to myself: 'Galli, you fool, why do you stay here to suffer when you, too, can have epileptic fits.' So I practiced having fits and, when I have one in front of the captain, I was sent to the hospital. In the hospital I have fits for the nurse and fits for the doctor—so pretty soon they give me my S. C. D. and I said: 'Goodbye, Texas, the hell with you. I am going to California.' When I get to San Francisco this regiment was being formed and with joy I learned it was field artillery. You must understand, captain, I must have field artillery, because of the horses. I love horses. I will go to hell for a good horse. If I am born fifty years ago I will be a first-class horse thief. Well . . . so here I am, sir."

"If you were my striker, Private Galli," I suggested, "you could take care of my horse and of course, you'd have a horse to ride, too. Naturally, you can cook. I've never seen one of your race that couldn't. Would you like to be made a cook and ride on a truck when the outfit moves?"

"I will be the captain's striker," said Private Galli.

"Good. What was it you wanted to see me about?"

"The first lieutenant (he named the senior one) has told me I must be his striker. I'll be damned if I'll be striker for a first lieutenant. The captain is an old soldier; I am an old soldier and I have come to ask the captain to save me from this disgrace."

"You are saved," I assured him, and he came inside and started pawing over my dirty linen and sorting out my boots.

Galli proved to be a trained valet, a jewel of great price. And he was a good horseman.

One week-end he went down to San Diego and spent all his money. However, he had a return ticket by train, but as he reached the station the last train for Camp Kearny was a block up the track, so he went uptown again and nosed around, hoping to find a friend and raise the price of bus fare, but all the friends had gone back to camp, because those that came to the gate after midnight would be gathered in by the military police and I had warned my outfit that the next man that walked into the arms of the M.P's would have his pass card revoked for sixty days. It was sixteen miles to Camp Kearny and Galli knew he couldn't hike sixteen miles and get home in time for reveille. And, even though he was the battery commander's striker he knew absence from reveille would have to be explained—or else.

Well, it would never do to browse around San Diego after midnight because the M.P's would pick him up then and demand a pass. Something had to be done—and it was. Galli carefully secreted his dog tags in his shoes, went up in front of the Military Police headquarters and had a first-class epileptic fit on their front stoop!

At once the No. 1 M.P. called for the corporal of the guard, who called for a stretcher and two bucks and they carried Galli inside and set him down. He continued to twitch, and moan and mow and mutter and foamy saliva flowed from the side of his mouth and his eyes rolled up until the horrified M.P's could see the whites of them and nothing of the brown. They frisked him for his dog tags, of course, but found none, but his collar ornaments informed them he belonged to Battery A of the 144th Field Artillery, which was stationed at Camp Kearny.

M.P's are just like any other soldiers, although a lot of people will deny this. At least they know the first principle of soldiering, which is to get rid of an undesirable, no matter where you send him. And since it was obvious that this jerking, drooling nuisance belonged in the Camp Kearny Base Hospital, they telephoned out to the base hospital and said they had a very sick soldier from the artillery brigade and for God's sake to hurry and send an ambulance down for him before he died. They didn't say he had fits, because they knew fits pass, and that the base hospital would never send an ambulance sixteen miles for a case of fits that would be able to navigate under its own power long before the ambulance arrived. No, the M.P's were taking no risks on being hung up with Galli. He frightened them and wrung their hard hearts; indeed, not until he heard the sergeant telephoning and gleaned that an ambulance would arrive for him presently, did he discontinue his act.

In about an hour the ambulance arrived, but just before it did the competent Galli, in anticipation of its imminent arrival, had a jim-dandy of a fit. The medical men came in, transferred him to their own stretcher, wrapped him in a blanket, put a pillow under his head and carried him thence.

As they rolled back to Camp Kearny Galli congratulated himself on two counts. He had promoted very comfortable transportation back to his happy home and he knew the thugs at the military police outpost would never grab a sick soldier out of an ambulance and toss him into the can for being A.W.O.L.

However, he was taking no chances for he was a little afraid of me. So, when in obeisance to ancient formula, the outpost challenged the ambulance, he started another fit. And when the ambulance driver, in reply to "Halt! Who's there?" replied: "Base hospital ambulance with a sick soldier," the sergeant of the guard bent an electric torch into the interior of the ambulance to make certain they didn't have some beer there, which, of course, he would have confiscated and—

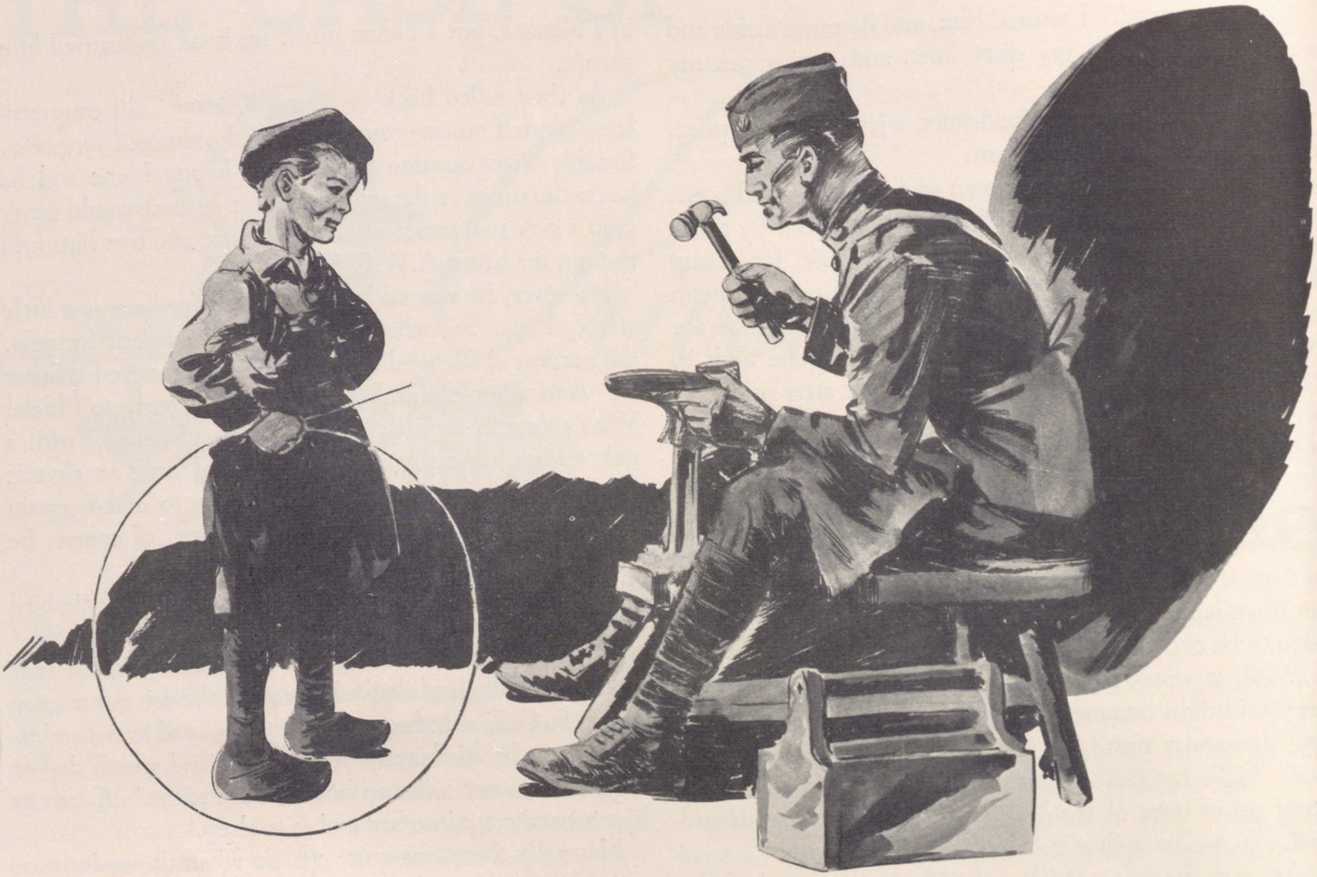
"Hurry, lads," he urged the medical men, "this bird looks like he's nuts or somethin'."

Down B Street, in front of the artillery brigade, the ambulance rolled, while the helper told the driver a snappy story. So Galli oozed out of the stretcher and as the ambulance went by his battery at the prescribed speed, day or night, of twenty miles an hour, Galli dropped off, ran to his tent and crept into bed and so to sleep.

Naturally there was quite a to-do when the ambulance arrived at the base hospital and the patient was not in evidence, and, naturally, those two medical corps men had to locate the patient to prove they hadn't had the ambulance out on a joyride. The outpost verified the fact that the patient was in evidence when the ambulance passed into the reservation, so the hospital fellows finally came to the conclusion that some buck in the 144th Field Artillery, Battery A (information supplied by the M.P's in San Diego) had sold them a pup, or else there was an epileptic soldier on the loose in the division and he must be discovered and sent back to civil life.

No man is a hero to his valet, but at least Galli had a measure of confidence in my sense of humor, so immediately after breakfast when he came over to do his morning chores at my tent he told me all about his success in swindling the M.P's and the base hospital. Never having observed hitherto a finer example of necessity, the mother of invention, I was sufficiently undignified to laugh, which moved Galli to remark that, after all, initiative and instantaneous decision are the prime requisites of a field artilleryman. I reminded him, however, that as a rule no buck soldier can play fast and loose with such government property as an army ambulance, not to mention the time of two men, wastage of gasoline and oil and wear and tear on tires, and hope to get away with it unchallenged, particularly in view of the fact that the base hospital was commanded by a regular army medical officer. Therefore, I directed him to make a confidant of First Sergeant Snooper, because nothing could ever happen in the army that that old soldier couldn't evade.

Snooper, being a loyal soul and possessing a moderate respect and, perhaps a pinch of affection for his captain,



". . . he stated further that he was a cobbler! Not a hell of a cobbler, of course, but nevertheless, a cobbler."

could not, of course, see me robbed of my incomparable striker by a mere poultice walloper, so the morning report sent in half an hour later carried Private Galli sick on pass in Oceanside, some thirty miles north. He then advised Galli to miss drill and hide in the barn until the coast should be clear.

Our worst fears were realized, for when the battery came in from morning drill I found waiting for me at my orderly tent my colonel, a medical major, two enlisted medical corps men and two M.P's, these latter doubtless up from San Diego for the purpose of identifying the culprit when discovered. My colonel informed me gravely that I had in my battery a man subject to violent epileptic fits and did I know it? I vigorously (and honorably) denied that any soldier of mine was so afflicted; indeed, that he couldn't be so afflicted, since if subject to violent epileptic fits he would have been bound to have thrown a few in the several months we had been in the service. Epilepsy, I pointed out, was an affliction no man may successfully hide and demanded to know what facts might be adduced to substantiate this thinly veiled charge that I was harboring a man who could not possibly be worth thirty dollars a month to our country.

The tale was then told and the M.P's amazed me with their exceedingly accurate description of Galli. As the outfit was still in formation in the battery street, I opened ranks and invited the outraged ones to pick their man. So they picked a small dark, brown-eyed Irish-American, who promptly called them liars and offered to fight the M.P's singly or in squads; moreover, he proved he had been on kitchen police all day Sunday and if anybody thought he wasn't just ask. Fortunately, I was able to alibi this man by proving he was in the kitchen for a week as a disciplinary measure and that his pass card had been revoked. Snooper's records showed that the only men not present were those on guard and Private Galli sick on pass.

Eventually the entire regiment had to submit to the scrutiny of the M.P's and when at length they departed, robbed of their prey, Galli came out of hiding and finished polishing my boots. He had my things in order when I came in, so I closed the flaps of the tent and said:

"Galli, throw me a fit. I want to see how good you are."

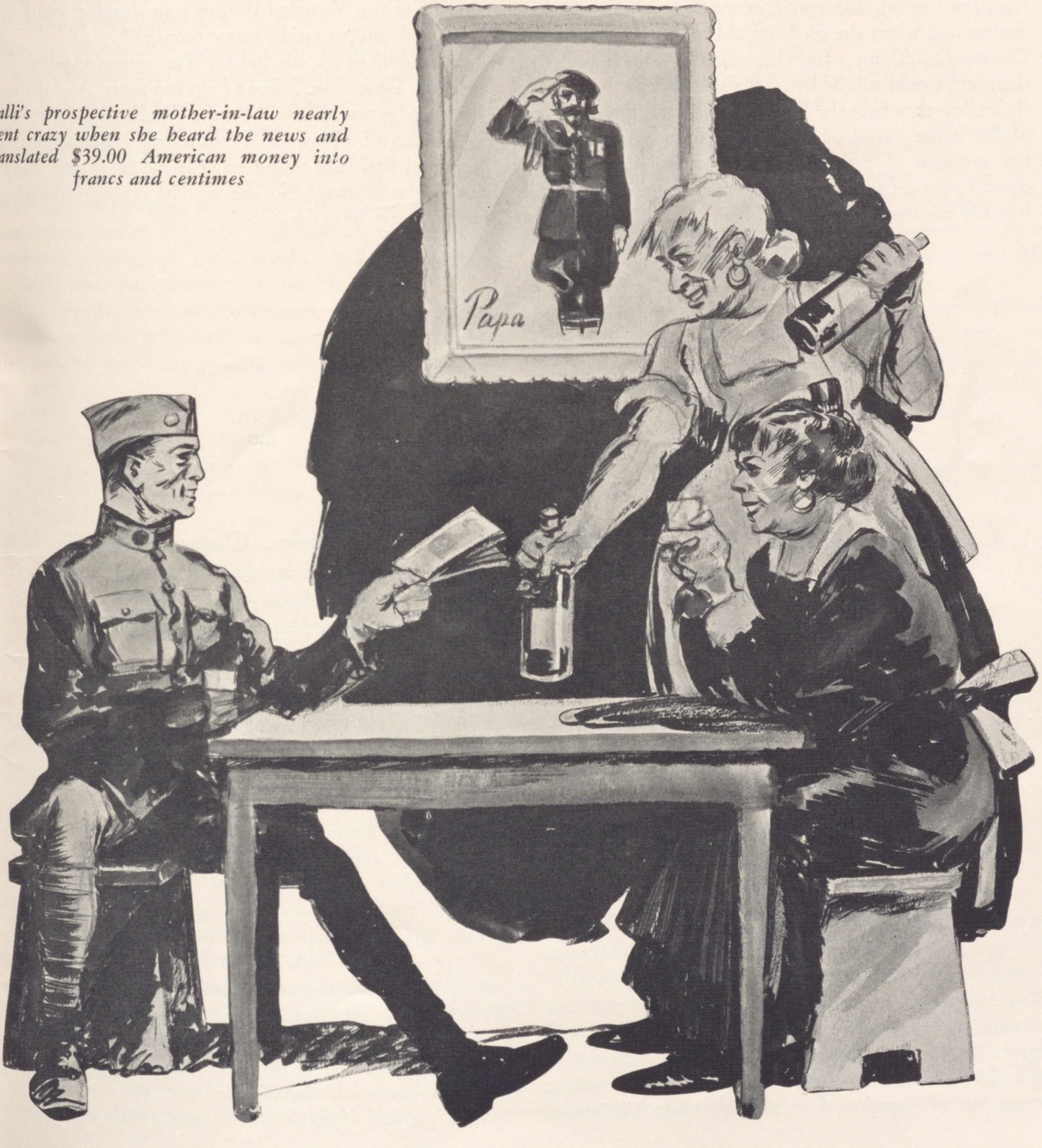
Promptly he fell backward, as a piece of timber falls, on my bed. In about twenty seconds he twitched himself off on to the floor. He made himself cross-eyed, he drooled, he gibbered and muttered a faint little mowing cry. It was a honey of a fit and he was perfectly horrible; although I knew him for a crook he almost convinced me I didn't!

I was so proud of Galli I yearned to reward him, but of course I couldn't make my striker a private first class. One day in France, however, while studying the table of organization of a G. P. F. 155-mm. battery I discovered that it had been made up by a horse artilleryman, for, although a G. P. F. battery is hauled around by 45 h. p. tractors, I'll be shot if the grade of saddler hadn't been provided! Promptly I decided to make some one a saddler, but announced to the outfit that any candidate for the job, which paid thirty-nine dollars a month in France, must be a cobbler and prepared to half-sole brogans if necessary. In fact, I had given the battery a cobbling outfit in the days when we were horse artillery and often had harness to mend. But nobody yearned to be a cobbler, because nobody had ever done any cobbling. After everybody had had a chance at the job and refused, Galli came to me and said he'd like the job; he stated further that he was a cobbler! Not a hell of a cobbler, of course, but nevertheless, a cobbler.

The first sergeant promptly called him a liar, but Galli stuck to his guns and to prove his case actually half-soled a pair of shoes for the small brother of a French lass to whom he had by now become betrothed. I thought he did rather well for a rank amateur, but the top said: "Sir, in civil life I am not a horse-shoer. I'm a cowboy, but I can shoe a horse. This guy never cobbled a pair of shoes in his life."

"No," I replied, "and he never had epilepsy, yet he threw a fit for me that made the real thing look like a pale imitation. I think there's something funny about Galli being saddler for a flock of 45 h. p. tractors, so make out the order and I'll sign it. Galli is now an engaged man and needs the extra pay."

The village washerwoman, who was Galli's prospective mother-in-law, nearly went crazy when she heard the news and translated thirty-nine dollars American money into francs and centimes. And Georgette, her lovely daughter, felt, when she saw Galli's chevron, that she had come a



Galli's prospective mother-in-law nearly went crazy when she heard the news and translated $39.00 American money into francs and centimes long way socially. Later, when we moved up to the vicinity of Clermont-Ferand, to the heavy artillery school, the artful Galli, not wishful to have his love letters read by the spies of a paternal government and distrusting the discretion of three descendants of French laundries in San Francisco who could read French, brought Georgette's letters to me for translation. So I would take a little time after dinner and do business with the French-English dictionary and make him a somewhat free translation. A sentence in one of the girl's letters always sticks in my mind because of its sad poignancy. She wrote:

"Dear one, I often think that nothing can ever come of our engagement. You are so rich and I am so poor."

Fourteen years after Galli and I parted company I met him in New York. Georgette had died the year after their marriage; seeing she was doomed he took her back to France and when she died her old man, who had been a Chasseur d'Alpine, and her mother told Galli their daughter would still be living if she had not met him, and thereupon they beat the lad with sticks and drove him out of the house. And once again he found himself facing the problem of promoting transportation home, so he stowed away on a steamer New York bound, and, since he had his passport, they booted him off at Brooklyn. He informed me he had married again and this time—"Well, captain, a man must learn from experience. This time I have married an Italian girl—ah, so beautiful, with golden hair and blue eyes. No, captain, no more French for me. If that old Blue Devil had not been my Georgette's father I would have cut his guts out."

I asked him if he was happy and he said he was reasonably so. He had two children and his boy, aged nine, could play eight pieces on the piano accordion and his wife never scolded him. He was on relief but he had accumulated a lot of olive oil; he lived in a four-room garret apartment and would I give him my photograph that he might hang it on his humble wall.

I said to him: "Galli, you aren't as smart as you used to be. Why haven't you had epileptic fits and fooled the doctors of the Veterans Bureau into slipping you a large chunk of compensation every month?"

But Galli shook his head. "No, captain, when I am far away from those fellows I am too near. And if I make fits, maybe my wife will think: 'Well, this is not such a joke after all. How do I know my husband does not have real fits? Of course he tells me he is only fooling, but—who knows?' So she will be crying to think our children may have fits, too."

☆ ☆ ☆ ☆

The aviator has come to the aid, not to replace the cavalry. Close reconnaissance is left to the cavalry whose vision is not dimmed by clouded skies. In combination with airplanes, squadrons of cavalry find new employment.
—GENERAL VON SEECKT, late Commander-in-Chief, German Army.

The Second Cavalry Brigade in Concealed Bivouac

By Colonel Innis P. Swift, Cavalry

On 1 November, 1939, the 2d Cavalry Brigade, in returning to Fort Bliss, Texas, from the 1st Cavalry Division Maneuver Area near Toyahvale, occupied a concealed bivouac at Walbridge Ranch, in the vicinity of Finlay, with results which are of interest to cavalrymen.

A similar bivouac had been occupied when the command had camped at the same site on the march to Toyahvale, in October. However, on that occasion, emphasis had been placed on dispersion rather than concealment, for the reasons that the areas which best lent themselves to concealment—the stream-beds—had not been made fully available, and that permission to cut brush for purposes of camouflage had not been granted.

For the bivouac of 1 November, however, the ranch owner, Mr. Walbridge, very generously placed no restriction on areas which might be used, and he also permitted unlimited cutting of greasewood. Accordingly, both dispersion and concealment were possible.

The Brigade, the leading elements of which arrived at Walbridge Ranch at about 10:00 AM, occupied the bivouac in accordance with the following order:

2D CAV BRIG
SIERRA BLANCA, TEX
31 OCT 39; 12:00 Noon

FIELD ORDERS)
NO............1)

MAP: Opn Map (Annex No. 1)

1. Our government will declare war on WHITE 12:00 Noon, 1 Nov. Enemy air activities over our route of march can be expected, commencing 2:00 PM, 1 Nov.
2. Brigade bivouacs night 1-2 November vicinity WALBRIDGE RANCH, taking special measures to: obtain maximum concealment from air observation; present unfavorable targets to air attack; counter air attack. Operations Map.
3. *a.* Passive measures:
    (1) Command bivouacs in high brush in and near stream-beds. Opn Map.
    (2) Dispersed formation. Men and animals in groups not larger than ½ squad, separated by not less than 30 yds. Not less than 30 yds. between individual vehicles.
    (3) All vehicles, supplies, lister bags, cots, etc., camouflaged. All gray animals covered with saddle blankets.
    (4) No tents pitched.
    (5) Fires screened. Smoke therefrom reduced to minimum during daylight hours.
    (6) All movement reduced to minimum during daylight hours.

   b. Active measures:
    (1) Air sentries posted. Each sentry to be accompanied by bugler.
    Warnings:

ENEMY AIR ACTIVITY	BUGLE CALL	MEANING
High-flying and observation aviation.	"Attention"	Take cover, Cease movement.
Attacking aviation.	"Fire Call"	Fire upon plane(s)

    (2) All mounted scout car weapons and at least ½ of all HMGs sited for AA defense. All weapons (and cars) concealed.
    (3) Equivalent of 1 Rifle plat in each Rifle tr prepared to fire at attacking planes. All personnel prepared to fire on attacking planes with pistols.

   c. Bivouac areas are reconnoitered prior to arrival of units.

   d. Sketch showing dispositions submitted by units by 2:00 PM.
4. *a.* Trains—released on arrival.

   b. Medical Det, PE and barber in Brig Hq area, as directed by Brig S-4.
5. *a.* (1) Brig CP—Vicinity of Corn Field. Opn Map. Exact location to be announced.
    (2) Regtl CPs—to be reported.

   b. Brig Net—remains open.

By order of Col. SWIFT:
PEARSON MENOHER,
Lieut Col, Cav,
Ex O.

OFFICIAL:
WM. S. BIDDLE,
Capt, Cav,
S-3

NOTE: Operation Map was a rough sketch showing boundaries between units.

Prior to the departure of the Brigade from the maneuver area, arrangements had been made with the Commanding General, Eighth Corps Area, for photographing the occupied bivouac site from the air. At 2:30 PM, accordingly, a plane of the 22d Observation Squadron of Brooks Field approached from the east and remained in the general vicinity until 3:00 PM. Two vertical and two oblique photographs were taken, at altitudes varying from 2,000 to 4,000 feet.

These photographs, as will be seen, give very little indication of the presence of troops at Walbridge Ranch. In fact, the area believed by the commander of the 22d Observation Squadron to conceal the Brigade contained only a part of the bivouac areas of two troops.

Actually, the Brigade occupied a considerably larger area, as the Overlay reveals. The strength of the Brigade at this time was:

	BRIG HQ	7TH CAV	8TH CAV	TOTALS
Officers	3	15	19	37
Enlisted Men	60	420	426	906
Animals	53 (1-gray)	455 (5-gray)	416 (4-gray)	924 (10-gray)
Vehicles (of all types)	13	21	26	60

I believe that this experience is of particular interest when one remembers the general lack of cover in the Southwest, and the fact that the Brigade was permitted to cut but one variety of brush. In more favorable terrain, and under campaign conditions, even better results could no doubt be achieved, with less effort.

The experience of the Brigade indicated that the following measures for concealment, in addition to those listed in the bivouac order, merit attention:

Taking full advantage of shadows.

Covering all shiny surfaces, such as hoods, windshields, and tops of motor vehicles, with canvas or sacks in addition to vegetation, in order to eliminate glare.

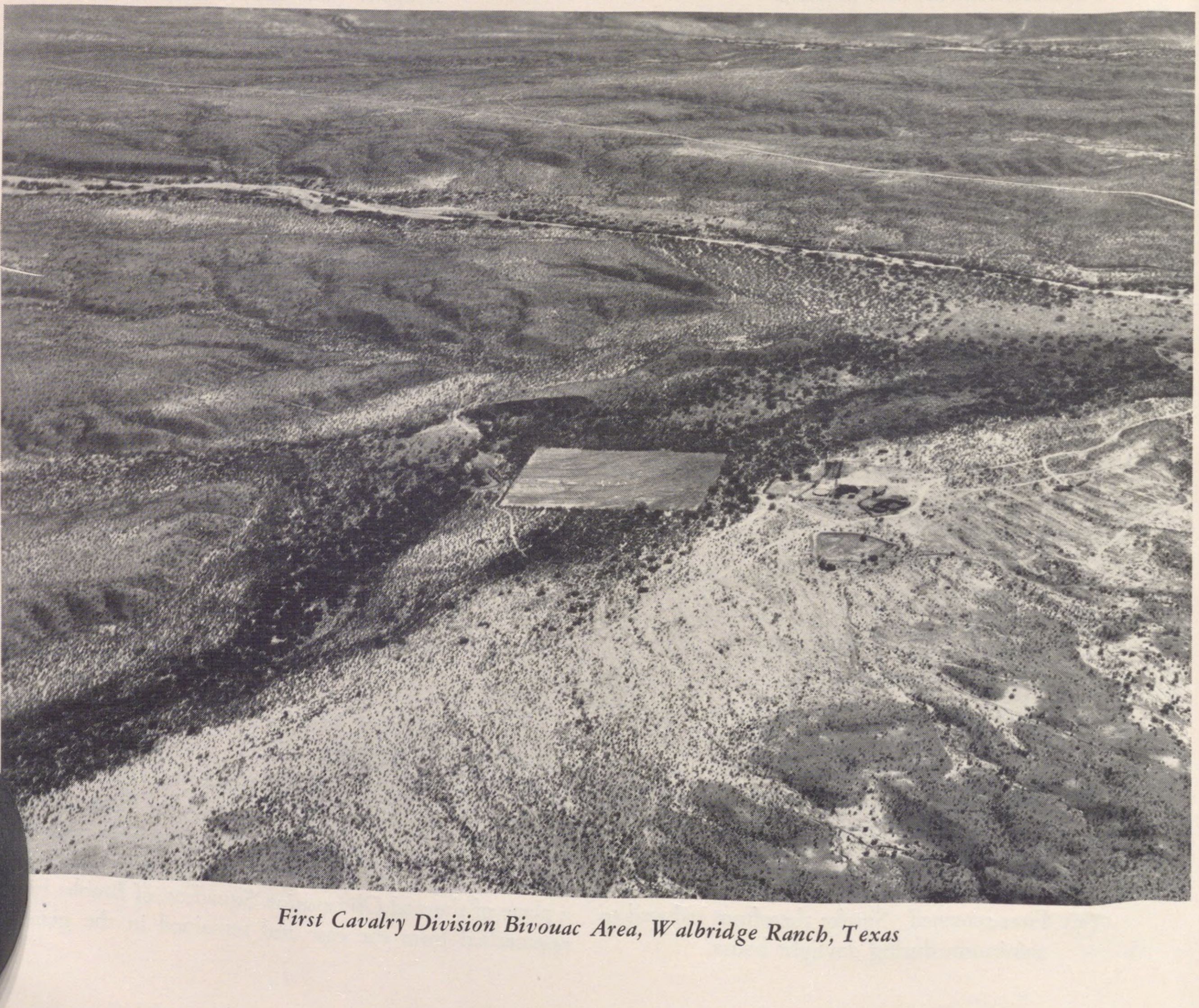
Breaking the bottom, as well as the top, lines of motor vehicles by means of vegetation.

When necessary to park vehicles on relatively open ground, scattering dummy trees or bushes throughout such areas.

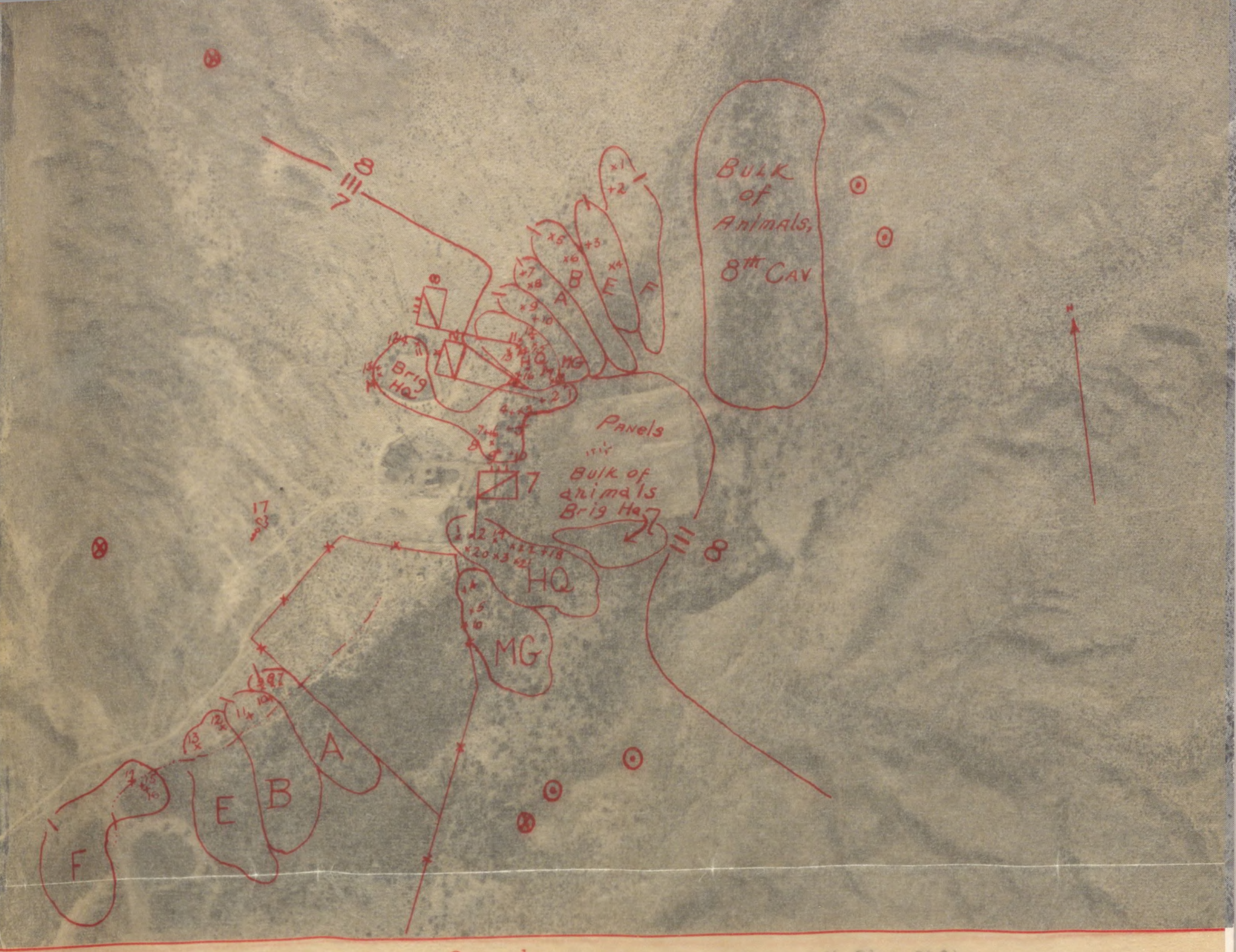
My own appreciation of the performance of units of the Brigade, as well as the favorable opinions of higher commanders, are indicated by the following letters:

HEADQUARTERS SECOND CAV. BRIGADE
Office of the Brigade Commander
FORT BLISS, TEXAS.
14 November, 1939.

Subject: Concealed Bivouac.
To : Commanding Officer, 7th Cavalry,
Commanding Officer, 8th Cavalry,
Commanding Officer, Hq Tr, 2d Cav Brig.



First Cavalry Division Bivouac Area, Walbridge Ranch, Texas



First Cavalry Division Bivouac Area, Walbridge Ranch, Texas (Air Photo V-2)

Scale

0 25 50 100yds 200yds 300yds 400yds 500yds

7th Cav.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17 Forage
18
19 Water
20 Motorcycle
21
22

Brig. HQ

1. Scout Car
2. Scout Car, Brig Msg Ctr.
3
4 Motorcycle
5
6
7
8 Kitchen
9
10
11 Ambulance-Motor
12 Ambulance-Motor
13 Ambulance-Mule dn
14 Ambulance-Mule dn

8th Cav.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16 Scout Car
17 Motorcycles (2)
18
19

⊙ = Machine Guns,
⊗ = Air Scouts.

NOTES:

1. Forage (item 17, 7th Cavalry area) includes forage (both hay and grain) for two succeeding serials: 82d Field Artillery and 1st Cavalry Brigade.

2. Locations of vehicles, etc., on overlay based upon unit sketches submitted during occupation of bivouac, supplemented by minute study of all photographs.

3. Panels (in center of open field) were purposely displayed, in order to permit observer to locate approximate center of bivouac area.

4. 7th Cavalry animals are within troop areas

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1. The concealed bivouac of the 2nd Cavalry Brigade, occupied in the vicinity of WALBRIDGE RANCH, near [illegible], TEXAS, on 1 November, 1939, was so effective as to have revealed to air observation practically no indication of the presence of troops, and to have attracted the particular attention of the Corps Area and Division Commanders, copies of whose commendatory comments are enclosed.

2. This result, particularly gratifying in view of the general scarcity of vegetation in this region, could obviously not have been achieved without the wholehearted interest and coöperation of all officers and men of the Brigade.

3. I take pleasure in complimenting all personnel on their superior execution of a difficult exercise.

4. A set of four (4) air photographs of the bivouac area is enclosed. Attention is called to the fact that the identification panels visible in the field east of WALBRIDGE RANCH were purposely displayed, in order to permit the aviator to locate the approximate center of the bivouac area.

INNIS P. SWIFT,
Colonel Cavalry,
Commanding.

3 Incls.
No. 1—Ltr CG 8th Corps Area, 11-9-39
No. 2—1st Ind, CG 1st Cav Div, 11-14-39
No. 3—Photographs.

HEADQUARTERS EIGHTH CORPS AREA

Office of the Corps Area Commander

RJB/mca

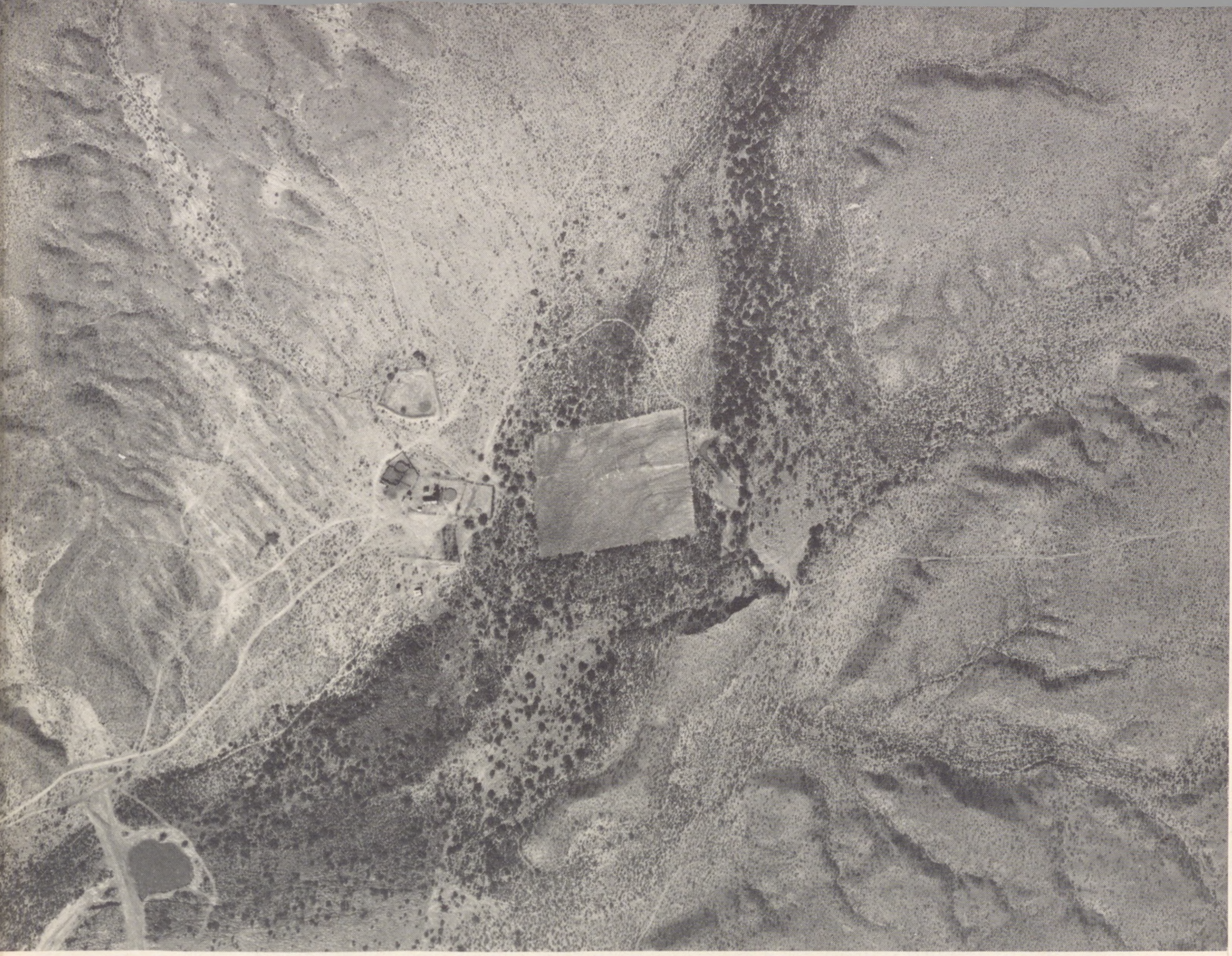
FORT SAM HOUSTON, TEXAS.

November 9, 1939.

Subject : Commendation.
To : Colonel Innis P. Swift, Cavalry, Commanding 2nd Cavalry Brigade.
Through : Commanding General, 1st Cavalry Division, Fort Bliss, Texas.

1. I am inclosing herewith four airplane pictures (two verticals and two obliques) taken of your camouflaged bivouac at Walbridge Ranch on November 1, 1939, at your request.

2. These pictures have been carefully scrutinized with a powerful magnifying glass by a number of officers at this headquarters and none of us is able to pick out a man, horse, vehicle or tent of the nearly 1,000 officers and men,



First Cavalry Division Bivouac Area, Walbridge Ranch, Texas (Air Photo V-2)

1. The concealed bivouac of the 2nd Cavalry Brigade, occupied in the vicinity of WALBRIDGE RANCH, near SMALL, TEXAS, on 1 November, 1939, was so effective as to have revealed to air observation practically no indication of the presence of troops, and to have attracted the particular attention of the Corps Area and Division Commanders, copies of whose commendatory comments are enclosed.

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INNIS P. SWIFT,
Colonel, Cavalry,
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2. These pictures have been carefully scrutinized with a powerful magnifying glass by a number of officers at this headquarters and none of us is able to pick out a man, horse, vehicle or tent of the nearly 1,000 officers and men,

920 animals, and 64 motor vehicles in your command. On the picture marked "V-2" appears an oval ink mark (not visible—ED.) which is where the Commanding Officer of the 22d Observation Squadron says he thinks you were camped. The pilot of the ship also informs me that he could see nothing but a flash of light from what he thought was three windshields in the area just to the north of the field in which your panels were displayed.

3. I congratulate you and all the officers and men under your command for a good job exceedingly well done. It shows what can be done by a sizable force when all lend their best efforts to the accomplishment of an objective.

4. Please convey to all the officers and men of your command my congratulations and commendations.

H. J. BREES,
Major General, U. S. Army,
Commanding.

Hq Ft Bliss, Tex, 14 November, 1939—To Colonel Innis P. Swift, Cavalry, Commanding 2nd Cavalry Brigade.

I take pleasure in forwarding this high commendation from the Corps Area Commander. Permit me to add my fullest praise to you and to your officers and men for your fine accomplishment on this occasion.

KENYON A. JOYCE,
Major General, U. S. Army,
Commanding.

☆ ☆ ☆ ☆

DISTINCTIVE COLORS—CAVALRY YELLOW

The first distinctive cavalry uniform was a blue coat with white facings, prescribed for the Light Dragoons in 1779. This was changed in 1782 to red facings with white linings for the "American cavalry." In 1799 the cavalry wore a green coat, with white linings and facings, the white being changed to black the following year. During the early part of the nineteenth century the cavalry ceased to exist, and it was not until 1832 that the nucleus of our present mounted service was organized as a battalion of Mounted Rangers, enlarged to a regiment of Dragoons the following year. Dragoon officers wore an orange sash from the very beginning in contrast to the crimson sash worn by all other officers. The facings, however, were yellow until 1851 when they were changed to orange.

In the meantime a regiment of Mounted Rifles had been organized which had yellow facings at first, then emerald green. In 1855 two cavalry regiments were created with yellow facings and in 1851 the designations of dragoon and mounted rifleman disappeared, all becoming cavalry with yellow as the distinctive color, which has ever since been retained.

—From *Orders, Decorations, and Insignia,* by Colonel Robert E. Wyllie.

General von Seeckt on National Defense

By Lieutenant Josef Egmond Gellermann, Cavalry Reserve

Solely from the technical military angle the rebirth of the German army within barely twenty years, under the stringent restrictions imposed by the peace of 1918, is one of the greatest military achievements of our day. The man considered as the creative genius of the German army is Colonel General Hans von Seeckt.

Descended from an ancient Junker family in Silesia and son of a Prussian General, Hans von Seeckt was commissioned in 1885 into the famous Alexander Guard Regiment of Grenadiers at the age of nineteen. Eleven years later he was on the General Staff and, in 1913, he became Chief of Staff of the Third Army Corps in Berlin.

With the outbreak of the war his promotion was rapid. In January, 1915, he was a full colonel still under fifty, and soon became Chief of Staff of Field Marshal August von Mackensen, having a large share in the victory at Gorlice Tarnow in 1915 and the subsequent invasion of Serbia. Then, as many other able German Generals, he was rushed to Turkey where he served as Major General and Chief of the Turkish General Headquarters.

With the defeat of Germany at the end of 1918 and the subsequent collapse of the German monarchy, von Seeckt placed his services at the disposal of the German nation, considering his duty to the nation as great as an oath to the monarchial form of government. He shortly became Adjutant General, and, in the years following, President Ebert invested him with military dictatorial powers. As commander of the armed forces of the Reich, he felt his primary duty rested in the preservation of order and discipline at any price, and his efforts did much to lessen the chaos and confusion rampant in Germany during the early years following the war.

Seeckt's greatest merit did not rest in the suppression of internal disorder, however, but in the genius of military organization with which he rebuilt the present German army. The Treaty of Versailles limited him to 100,000 men who had to enlist for a period of twelve years . . . von Seeckt found the solution. With the technical aids of modern mobility and fire power, one hundred thousand expert soldiers might be more desirable than one million half-trained men. As it will be stated in the following pages, he believed that the war proved the short comings of the large half-trained mass armies. He felt their function would have to be changed in future wars to conform with new developments in transportation and firing power. Soon thereafter, the allies became aware of the fact that Seeckt had turned the restriction to a real advantage, but by then it was too late and the treaty had been signed. In 1929, President von Hindenburg promoted von Seeckt to a General and his last rank in active service was that of Colonel General.

For many years von Seeckt was somewhat mysterious, yet admired, as the father of the German Reichswehr. He was known as the "sphinx with the monocle" because he never came out in public either by speech or writing until years after his retirement.

Following his retirement in 1926, he served in the Reichstag from Magdeburg in 1930, and then he made two trips to China, as military adviser to Chiang Kai-shek until 1934. In the years before his death, in 1936, he wrote a sort of military testament entitled "Thoughts of a Soldier" and a little book entitled "National Defense,"[1] which is a summation of his work, "Thoughts of a Soldier." *It is from this volume* that the writer has extracted some of the ideas which have carried such tremendous force in the recreation of the German military power.

General von Seeckt says as to *Objectives of Armaments:* (1): "An attempt has been made to distinguish between offensive and defensive armament, representing the first as threatening, and the second as admissible. To define such a difference is difficult; no state will admit conquest as the object of its armament, but claim defensive necessity against possible attack, which, on its part, may have to be conducted in the form of an offensive."

As to the *Problem of Neutrality,* von Seeckt states:

"During debates about permanent peace, *the question of neutrality* has often come up not only in the sense of declining any alliance or obligation with military consequences, but also in the sense of lack of interest in international affairs with a concurrent omission of all armament. As long as the Kellogg Pact and similar treaties connected with a radical change of human nature have not made war utterly impossible—which obviates any special neutrality—a declaration of absolute neutrality has only a one-sided value. The same applies to a neutrality declaration *ad hoc,* that is in case of an armed conflict between other states. *Whether a state can maintain its neutrality depends not only on its own wishes but also on those of others.* A nation whether small or large which, trusting to its neutrality, has failed to secure its self-defense is an absolutely negligible quantity in case of an outbreak of war. It follows that *a nation which had decided on neutrality* in principle—and wishes to maintain the freedom of being neutral—*must be in a position to protect this neutrality.* This basic truth is the same for all nations which do not live in the empty space of eternal peace but among not always friendly neighbors, and the larger a state is, the more dangerous its geographic position, the closer its international connections, the more urgent is the need for an armament which secures the freedom of its decisions and policies. It must be understood that *adequate armament is not a threat of war, but on the contrary a guarantee for the maintenance and security of peace of a nation.*"[2]

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[1] Seeckt, von, Colonel General: *Landesverteidigung,* p. 21, Verlag für Kulturpolitik, Berlin, 1930.

[2] Op. cit. pp. 26 to 30.

Von Seeckt here emphasizes the necessity of armed neutrality. It has often been argued that the World War would have been considerably shortened if the United States had had an adequate army in 1914, lending strength and effect to the pronouncements of the National Government. The war would not only have been much shorter, but we would have never had to enter it, saving thereby one hundred thousand American lives and billions of dollars of national wealth expended during the war, after the war, and for a long future to come.

Looking Backward

"One could find as an English or French officer that the course and end of the war was just as unsatisfactory from the allied military point of view as from the German side. A statesman would have to ask his generals if a future war could not be brought to a more satisfactory result with a smaller use of force and energy.

"Because if we eliminate all singular operations, all strategic and tactical successes and failures, we come to this conclusion: the war was decided after a long and exhausting struggle by the masses of men and material with which the Central powers were crushed by their opponents. Thereby nothing is said against the strategic ability of the commanders on both sides; their actions were determined by the masses placed at their disposal and they could do little else but to throw the masses against each other until one side was finished.[3]

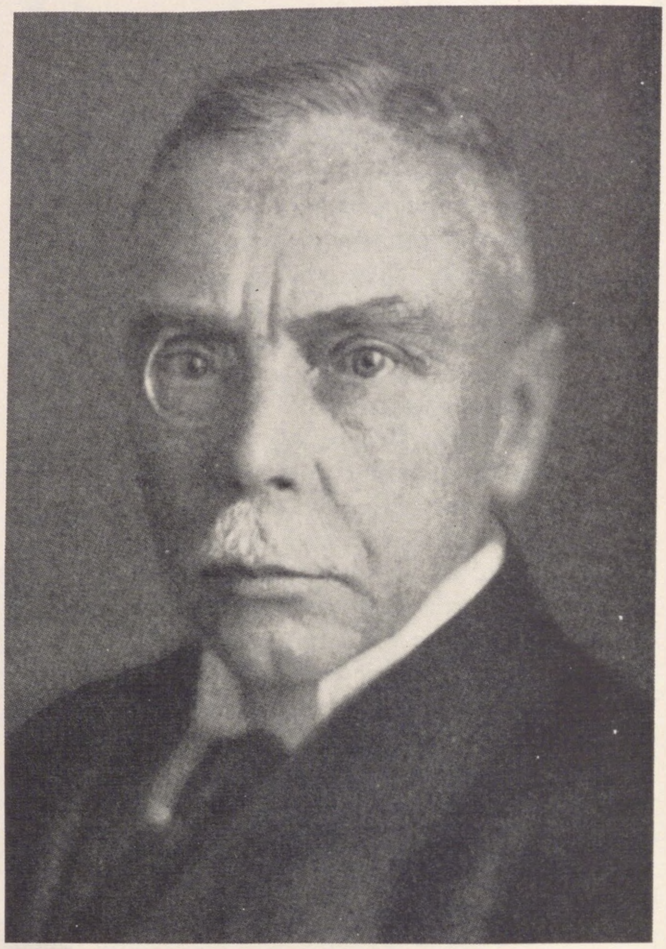
Looking Forward

"This is not a happy picture for the generals of the next war; but it is not any better for the people or the statesman. It will mean again that every possible bit of human energy and material force must be made available and the power of one mass thrown against the power of the opposing mass. *The decision will again rest on which side the United States will stand,* and to a greater degree will new techniques eliminate the human power.

"This force 'man' furnished us with the universal military service, and it functions as a mass; there is not time to educate the individual to be a soldier. The tactic rests therein that, after days of destructive firing and when thousands of men have been destroyed and the offensive 'over the top' begins, *the defense will still have a dozen machine guns to repel the opponent.* One can and should not miss the heroism in this kind of battle; but it offers to the tactician no better outlook than to the strategist. The result must be to create and maintain mass effect. Where remains then the art of war?"

National Armies, Past and Future

"Let us analyze the moral value of the national army. It will reflect the character, good and bad of the nation at large; as a mass, its soldierly spirit is in proportion to the training period. The requirement that it be a people's army and feel as part of the nation must be common to the regulars as well as the national army.



General von Seeckt

"In the general submission to the duties required for the preparation of national defense, and in the common though brief schooling in military spirit, rests one of the great values of universal military service which should not be given up voluntarily by any sovereign state. Aside from this rather general psychological education the soldier must also be trained technically. This requires a certain time, the length of which is a matter of varied opinion. The soldier needs for the fulfillment of his duties a special mental and emotional training; *because he is required to perform a special task—the willingness to lay down his life for an idealistic purpose.* Such training cannot be acquired through knowledge alone, but, as soldiers will admit, only through habit. Discipline, the basis of an army, must become habit, just as voluntary submission and the art of command. . . .

"Let us examine the experience of the last war as to whether all national armies have met the expected requirements. Beginning with Germany, the combat and interior discipline of the first troops met very high demands even though, after the first great efforts and losses, especially among the regular officers, there appeared traces of a letdown of discipline. Behind the front lines—where older men were used and the influence of officers was considerably restricted by their number and quality—there were unpleasant occurrences even at the beginning of the campaign. This changed in the course of time the quality of the reserve, and thereby, the quality of the entire army declined, especially that of the new supply of leaders, for, while it was perhaps possible to give a meager technical training to the soldier, *it was impossible, for want of time and opportunity, to supply a new officer personnel.* Therefore, to a larger extent the army became in every sense a citizen army, reflecting clearly the spirit of the people, good or bad. Who can blame the people or the army? But it is necessary to point out that the defects of the national army were also symptomatic with the German Army.

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[3] Op. Cit. pp. 36 to 39.

"This gives food for thought that a national army is a reflection of the moral and political condition of the nation and that to arm the nation as required under universal military duty carries certain internal considerations and dangers.

"On the French side there was a similar situation. The moral value of the troops decreased in the course of the war; we know of disciplinary difficulties in some divisions, but also of the ruthless suppression of such movements. The army was backed by a determined national government.

"England went slowly and cautiously into universal military service and did not believe that a call for volunteers would be sufficient. Nothing is known of moral defects, which may be due to the typical English stubbornness with which the people 'bit' into the war.

"The American divisions showed all the freshness with which that country entered the war, yet these troops were too uniformly organized and too brief a period in war to show any changes in their value; *their great losses showed how in our day courage cannot take the place of thorough training.*

"On the Russian side, the consequences of a citizen army became particularly drastic. The first Russian army distinguished itself through discipline, logically combining national characteristics with military education. However, as the influence of the officer corps declined and as the training of the substitutes became more superficial, the Russian army, at an amazing speed and to an amazing extent, lost every control and was degraded by the influence of revolutionary elements into an armed and uncontrolled mob which smashed, not only the Government, but Russia.

"In Bulgaria, every peasant had been a soldier for ages past; he went to war with a rare native devotion and unselfishness. Yet as the war enthusiasm passed and war fatigue began, the army simply went home, to be stopped by nothing and nobody. The soldier, on his own initiative, again became a peasant. We see here definitely the other side of the picture of a true national army.

"In neighboring Serbia—and this must be acknowledged—this did not occur. Universal military service included the last man; during the war hardly any men, except the dead, wounded, or imprisoned, were to be seen in Serbia. The military spirit of the nation, and the flaming patriotism of a people not even organized, were reflected in the army. The people and the army withstood together without hesitation every misfortune of war up to its final success.

"As to Turkey, only one example of the last period need be cited. A division which was to be taken from Constantinople to Syria required almost a second division to guard the first from running away—war fatigue and home sickness had become so strong among these patient and courageous Anatolians.

"Universal military service has different effects in different countries, especially where national controversies exist. Part of the Arab troops went over to the English, and Czech troops left the Austrians for the Russian side.

"On the basis of the experiences of the World War, there is a gradual realization that the time of mass armies has passed and the future will bring forth small, highly trained armies, capable of executing quick and decisive operations and, thereby, restoring the dominance of mind over matter. Along with these armies, a national defense based on a modernly developed universal military service will come into existence.

"It would not be permissible to neglect the weight of numbers. It also has its place within the new organization, but it does not have absolute dominance. The objective of modern strategy will be to bring about a decision with mobile highly efficient forces without or before the masses will be brought into motion. The theory of modern warfare remains on the basis of a national defense regardless of whether a country attacks in order to overcome a threat or defends against an offensive of the opponent. In the first case, only quick, forceful action has a chance; in the second case, the country is at a disadvantage in opposing the invasion of a strong mobile force with the slow mechanism of a national army. However, a citizen army as a means of national defense should not be eliminated; nor should it be a part of the peace time army, but rather a second line of defense."

Considering the fact that the theories restated from General von Seeckt's book were written almost ten years ago, his ideas and recommendations carry almost prophetic value. The organization of the United States Army seems to be in perfect conformance with the ideas expressed by von Seeckt. A small professional army (which corresponds to our regular army), an attached educational force in close touch with the regular service (which meets the general idea of our Officers' Reserve Corps and its preliminary training schools), and a national army or second line of defense (which corresponds roughly to our National Guard).

In appraising the performance of the national armies of the various countries during the World War, he states that they did as well as could be expected, but that the function of the army of the future will be to have a small, exceedingly effective striking force and a large national mass army behind it. The recent campaign in Poland is illustrative of the operation under this general plan of the German army as created by v. Seeckt. Within eighteen days, Poland was defeated, while the great mass of the German army never entered any action in Poland at all.

In discussing the professional army, von Seeckt states: "The professional army should supply its personnel requirements continuously rather than in series and *the active force should never fall materially beneath the fixed maximum*. The troops should train in small recruit schools thus supplementing their ranks. In this way the army is at all times ready for action and does not require any mobilization and filling up of ranks. This also applies *to equipment and ammunitions which should be available in such quantities that the requirements can be fully met* until new war material can be supplied by the country. Certain very important equipment and armament parts which are especially prone to over age or decay, as for instance, cars and airplanes, may be supplied from civil transport, but for the first needs there must be a sufficient quantity on hand with the army. Without going further into the details of the organization of the professional army, it should be emphasized that its basic characteristics are speed and mobility and therefore it must have, along with efficient infantry, *above all a powerful, excellently trained and armed cavalry,* airplanes, motorized forces and transports. It should not be forgotten that the road and bridge conditions in Europe limit the use of motorized troops.

"This active professional army (which may also be designated as 'operations,' 'security,' or 'covering force') has an attached and equally active educational force with the task of preparing the national army and educating and training the mass of the male population in military tasks. It is important to keep the 'educational force' in permanent and closest connection with the operating force, and through interchange of personnel, to keep the educational force at the height of its ability and energy. To designate a number for this educational branch is difficult because that is dependent upon the extent to which the state wishes to give military education to its potential reserves."[4]

The essential criticism of our army under the von Seeckt theory rests in the fact that the professional army is very poorly equipped, even in its barest requirements, for men and material. While the regular army is to serve as an initiative skeleton force of a large national army, it appears that we have at present only "the skeleton of a skeleton." For further details, one need only consult the critique of Lieutenant General Drum about the recent maneuvers.

Furthermore, it is gratifying for cavalrymen to find that the creative genius of the present German war machine considers a powerful, excellently trained and armed cavalry as a "must" requirement.

THE PROBLEM OF LEADERSHIP

The General reserves one of the most basic subjects for the end of his study, namely, the problem of leadership. Here he states:[5] "It is relatively simple for the regular army. Beside the present-day high demands on the initial knowledge and ability of the officers, the constant presence of war-strength troops offers them an opportunity for active work and training. Through the constant reciprocal use of regular army officers for service with the reserve formations of the national army, they learn the different mode of training, treatment, and command necessary for service with the national army.

"The number of regular army officers must be proportionately higher than actual war requirements, because part of them have to be maintained as reserve for losses, a procedure which was neglected on all sides during the last war. A part of the regular army officers, especially the older ones, must also be turned over to the national army.

"The Reserve Officers Corps. The national army should supply its own officers. The Reserve Officers Corps demands of its members a special broad training the objective of which is not the same as that for professional officers, but within the scope of the task set for the national army. If we consider the devotion of Swiss citizens in sacrificing their time and energy to acquire officers' training along with the practice of a civilian occupation, we need not doubt the willingness of citizens of other countries to perform in a similar manner. Aside from voluntary coöperation to take additional duties, *the choice of officer personnel should be made dependent on the individual capacity for leadership*.

"Principal emphasis rests on the professional army, which is in its best sense a national army, a part of the people. As an enforcement agent for the state and as a protector of its independence, it represents the state in its truest sense. Through its special position and professional unity, the army is placed beyond the sphere of politics. In fulfillment of its high task a professional pride and *esprit de corps* develops which guarantees devotion to the profession. It is democratic in its best sense, as it brings out within itself the best qualities of the nation. In such an army the state has an ever reliable servant; it will resist internal temptations and upheavals just as it will meet external struggles, with a soldierly spirit. It is an example to the nation in arms and its educational force becomes a school of the people, not only in preparation for national defense, but also in the nation's education in the spirit of national duty, order and discipline."

This military testament of the general who is generally credited with being "the father of the Reichswehr" contains ideas which may serve us in the formation of our national defense policies.

The first two months of the present European war have amply demonstrated that victory rests with the efficient not the heroic.

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[4] Op. Cit. pp. 74-77.

[5] Op. Cit. pp. 84-86.

Mechanization and Motorization

The Final Chapter Has Not Been Written

By Colonel H. S. Stewart, Late 15th Lancers, Indian Army

Mechanization (the substitution of the internal combustion vehicle for the horse) has been forced on armies by the elimination of the horse from industrial life. Motorization (the carriage of marching personnel in internal combustion conveyances) has been deliberately adopted with the object of increasing strategical mobility. There is no reason to suppose that either of these innovations will increase tactical mobility to any vital extent.

Military exigencies have not been the only influences that have favoured the intensification of mechanization and motorization. The world has become "machine minded" and, like the Athenians of old, delights "either to tell or hear of some new thing"; and many even believe that increases in mechanical appliances will make reductions in the fighting personnel possible.

Lord Mottistone comments on this remarkable notion —"The second fallacy is the idea that by 'mechanizing' —a hateful ungrammatical word, but it seems to have slipped into our language—we can create a more powerful force with fewer men. I am persuaded that this is a delusion as profound as the theory that there will be no more war."[1]

Apart from the incidental disbandment of the horsed cavalry—an arm which cannot be improvised either in peace or war—there is much to be said for the general policy of transforming a small standing army into a completely "armoured force," provided that a nation can be satisfied that the completely armoured force is suitable for operations in every area in which its army can reasonably be called on to fight.

However, in the particular case of Great Britain, the dangers of adopting such a policy are twofold. The complete mechanization and motorization of the Home Forces entails their linked units stationed overseas being similarly treated; and in India, (where the bulk of the oversea garrisons are stationed) the British and Indian Armies are so inseparably connected that the Indian Army cannot in the long run maintain an organization completely different to that of the regular British Army.

In many areas where British Armies may be called on to fight—climate, terrain, and other special conditions make mechanization and motorization a distinct handicap, instead of an advantage.

Those who have motored in India in the hot weather, even in comfortable private cars, know what a strain on energy and health is involved. Few with experience believe that during the hot weather, either in India or on or just beyond its frontier, it would be possible for armies either to replace the horse by fighting vehicles, to depend extensively on motorized fighting units, or even on entirely mechanized transport.

Climate and weather conditions are not subject to human will; neither—in practice—do the natives of hot countries stand exposure to hardships and heat any better than the Europeans, whose superior vitality comes to their aid. So such difficulties cannot be overcome by manning vehicles with native personnel.

In India proper and across the frontier, the roads other than trunk ones are frequently earth tracks, which quickly cut up under heavy traffic. Many of these are absolutely impassable during the rainy season, more especially as there are hundreds of unbridged rivers which are then only crossable by ferry boats or specially made bridges, which will not take heavy vehicles. There are many miles of excellent trunk roads in India, and the private car owner, provided he does not mind taking long circuitous routes, can reach all parts of the country. But armies in war cannot rely on roundabout communications. The only through motor communication from North to South is the road through Poona to Bangalore, and the only practicable road communication between Bombay and Calcutta is the road via Jhansi and Cawnpore. Karachi, the great port of the Northwest frontier has no through road communications with Northern India. Such factors have a most important bearing on the use of fighting vehicles for frontier defense and internal security in Asia.

Palestine, Arabia, and the Tripoli-Egyptian frontier, each have problems of their own which are as difficult and individual as those of India. Those who have motored in the East know to their cost that "Sand" can be bad as "Mud." Roads over it, can be made with netting; but you cannot cover an area with this.

These practical difficulties have to be faced; but in fact they can neither be solved nor avoided as the difficulties incidental to the employment of fighting vehicles in hot climates, will persist as long as internal combustion engines generate heat; and the difficulties incidental to mechanized transport outside Europe will remain till road systems are revolutionized.

Road problems are matters that are under control of the civil administrations; but even if these classed the construction of strategical roads as the most urgent need of their areas it would probably take a century to build (even within the British Empire and on its frontiers) the road systems necessary for a mechanized and motorized army. Even if that were done, it would not facilitate operations in the countries outside the British boundaries. Under these circumstances it is not wise to put too many eggs in the basket of mechanization.

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[1] "Fear and Be Slain"—The Rt. Hon. Major General Sir J. E. B. Seeley (Lord Mottistone).

But the aforesaid difficulties are not the only ones. The armoured force is an experiment; possibly it may prove to be a successful experiment, but this is by no means certain. It largely depends for its justification on its very problematical value in a war with a *first class* European power.

If, as many think any Western European War is likely to develop into trench warfare on the French frontier, strategic mobility—the main virtue of armoured forces—will be at a discount. If on the other hand there is war on the desert frontiers of Egypt, it is quite probable that men on animals (camels or horses) may prove of greater value than an armoured force.

There is such a thing as the "maximum of mechanization" that even a great nation can maintain in the field. When this is exceeded, the power of an army is decreased, instead of being increased. A war in Europe entails the logical consequence of Great Britain raising a great army, *which it will not be possible to motorize, and whose mechanization at most will be what is essential to supplement the carriage of personnel and material by rail.*

It is indisputable that new armies raised for a war could not be motorized like the present Regular Army and some of the Territorials, despite the fact that the British military organization outside the regular army has to develop in harmony with popular sentiment.

Slogans have been associating the intensification of motorization and mechanization with increases in military efficiency; but it is a mistake to persuade the public to attach exaggerated importance to motorization and mechanization; because these can only play a small part in static warfare, which would seem to be the only sort of warfare probable in Western Europe. It would be unfortunate if newly raised units came to feel that they were being treated as "cannon fodder" because they were given a less highly mechanized and motorized armament than the old regular army. But for practical military reasons this must come about.

PRACTICAL DIFFICULTIES IN WAR

Apart from all theories of the tactical value of totally armoured forces, about which there may perhaps be no general agreement, there are formidable practical difficulties connected with military mechanization and motorization which cannot be brushed aside by mere argument. These are concerned with:

(a) Roads and terrain.
(b) Supply and maintenance.
(c) The limitations of mechanical contrivances.
(d) *Morale.*

ROADS AND TERRAIN

Every nation has limited its motorized and armoured forces and the idea of huge armies rolling along roads at a fast pace, is a dream. Apart from all questions of the space and capacity of roads and bridges, rivers and mountains hamper the mass employment of motor vehicles; and in war demolitions will complicate matters still further.

One of the greatest difficulties in future wars will be that of ROAD SPACE. Every vehicle, whether fighting or transport occupies a certain amount of space, even when not on the move. While tracked vehicles are designed to cross country in emergencies, this is not their normal procedure, and in practice they will, whenever possible, travel on roads and stand on or near them. There is a limit to road area, and for that matter to parking space in proximity to roads or tracks. Anyone who has driven a car away from any great gathering, knows how slowly cars move on crowded roads. The immense number of vehicles accompanying modern armies are likely to so block and jam the available communications, that vehicles will be obliged either to move at a walking pace or perhaps halt altogether. "Spacing" does prevent blocks, but it also limits the number of vehicles that can use a road. A very large number of suitable roads and bridges facilitate movement, but the problem of the repair of these under wear increases with their number.

Road and bridge problems limit the progress of mechanization, no matter how favorable the country is for fighting vehicle movement, because (even in countries of open plains or deserts suitable for the cross-country movement for fighting vehicles with ample communications) only as long as the roads and bridges remain passable can the essential transport continue to keep an army mobile.

SUPPLY AND MAINTENANCE

The modern mechanized cross-country vehicle has passed out of the experimental stage; today it can probably go anywhere that a limbered horse drawn vehicle can, provided that its mechanism remains in running order, and supplies of petrol, oil and tyres continue to be available.

So many factors depend on the part of the world that it is called to fight in.

"War is a rough and ready business of making things do. All elaborate arrangements dependent on petrol supplies, may give one a good start but nothing more when the real clash of arms comes. In moving warfare, as before, the infantry man will walk on his feet and carry his rifle, the cavalry man will bestride his horse, which moves him swiftly from place to place, can keep alive in most countries with but little help, and, itself almost immune from gas poison, can transport him safely above lethal gas which must float within a foot of the ground. Woe to the country which trusts solely to a mechanized army."[2] [NOTE: This somewhat overstates the case, although it contained a strong element of truth. Horses are not immune from mustard gas, but the probabilities are against the use of gas in war.]

Men can keep animals in health and work for indefinite periods without difficulty or outside assistance; but oil and tyres cannot like forage be obtained locally. The requirements of tyres, oil and petrol for the masses of vehicles now used in war, make it doubtful whether the present world supply of raw material is sufficient to meet the demands of a completely mechanized war which lasted over three months or so between great national armies; even if hostile action did not interrupt the transit supplies from overseas. Also there is the fact that the mechanized forces will not have the monopoly of such supplies as are available. The air force and the Navy will be kept competitors.

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[2] "Fear and be Slain"—The Rt. Hon. J. E. B. Seeley (Lord Mottistone).

Even the financial strain of paying for raw materials sets a limit on the developments of military mechanization; particularly so in view of the "cash and carry" policy of the U. S. A. From the moment that a campaign opens, the necessary replacements of components will necessitate the manufacture on such a vast scale, that there is a definite limit to the size of the mechanized forces that can be maintained in fighting condition, over an extended period of mobile warfare. The small defects of machines (inseparable from hard usage) cannot be put right without mobile workshops; and these require very heavy transport vehicles that no stretching of the imagination can class as really mobile.

In a war of short duration, mechanical casualties can be largely obviated replacing broken down vehicles by spare ones. The more spare ones that can be provided the longer can such a system work. Abandoned vehicles can be repaired and used in their turn as replacements. It is obvious however that limitations incidental to such a system will be one of the factors that will determine the "maximum possible of mechanization" of an army.

The Limitations of Mechanical Contrivances

One can fully believe in taking the maximum advantage of science in war without accepting the extreme and revolutionary theory that "Tools or weapons, if only the right ones can be discovered form ninety-nine per cent of victory." . . . "Strategy, command, leadership, discipline, supply and all the moral and physical paraphernalia are nothing to a high superiority of weapons—at most form one per cent which makes the whole possible."[3] This does not harmonize with the lessons of history.

"Warfare, either ancient or modern never has been and never will be mechanical. There is no possibility of the combat of instrument. It is the soldier that brings about victory or defeat."[4]

The horse of Troy, the chariots of Persia, the elephants of Pyrhhus and the military machines of Archimedes were one and all the marvels of their day. They were as surprising to their contemporaries as were gunpowder and Greek fire in the Middle Ages or as aeroplanes, tanks or gas were in the late Great War.

The "Horse of the Greeks" is reputed to have caused the fall of Troy, but the utility of such a contrivance was entirely dependent on the *morale* of the men who concealed themselves within it. Alexander defeated the Persian chariots, Pyrhhus was in the end unsuccessful in spite of his elephants, Syracuse fell in spite of the machines of Archimedes. Gunpowder did not give the Chinese, its inventors, the mastership of the world, Greek fire prolonged the life of the Byzantine Empire but did not save it from extinction. Neither gas nor tanks brought victory in the Great War.

"The conflict of man and material is included in the concept 'War.' The shield was invented to meet the sword and the concrete 'dug-out' to thwart explosive shell, the mask to keep out gas and so on; the struggle will continue as long as there are wars, the weapon of offence gaining the upper hand until the appropriate weapon of defence has been shaped to meet it. Technical science is busy on both sides. It is therefore false to speak of the victory of material over man. Material has prevailed over human masses but not over man, and never will because it is only animate in the hand of man."[5]

In the recent wars in Abyssinia, Spain and China, motorization and mechanization have not exercised the decisive influence that their advocates prophesied. The Italians at one time had to employ 78,000 transport animals in Abyssinia. In Spain battlefields were littered with victims of the modern anti-tank weapons; and it is misleading to make too much of the fact that many of the fighting vehicles used in Spain were of inferior design, or employed in an unsound manner; the Russians, Frenchmen, Italians and Germans, who supplied and in many cases manned the vehicles, were not fools; they were men with practical experience of mechanized warfare, that many of their critics do not possess. It is quite true that these wars were not conducted by first class industrial powers; but even when a first class industrial power conducts a war, the distance of the theatre of war from the industrial centres may greatly minimize any advantages which first class industrial powers possess.

"Tom" Wintringham commanded a battalion of the "Red International Brigade" in Spain; and his extensive practical war experience is entitled to respect, in spite of his extreme political opinions. He says:

"Daylight advances by infantry and machine gunners under air menace is difficult but possible. Daylight movement by mechanized forces that are not heavily picketed with anti-aircraft weapons is suicide."

"The troops who suffer most from air attack are the fully equipped mechanized heavily armed divisions that are advocated by most of the modern theorists of war."

"This I believe is the meaning of those two battles (Gandalajara and Jarama) and much of the subsequent fighting in Spain."[6]

Morale

Novel death dealing appliances have frequently necessitated radical changes in the methods of waging war, but they have never minimised the absolute necessity of a fighting spirit; because in the hands of men anxious to avoid defeat the most powerful weapons lose their value.

The utility of any contrivance will always remain entirely dependent on the *morale* of the men using it. Machines of themselves possess neither the power of offence nor defence. The surprise factor has always been the greatest strength of any new appliance. Familiarity breeds contempt. *Morale* alone will at times nullify the most deadly weapon.

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[3] General Fuller in "Future Warfare."

[4] Homer Lea in "The Valour of Ignorance."

[5] General von Seeckt—"The Thoughts of a Soldier."

[6] "English Captain" by Tom Wintringham.

"An army possesses a heart and brain as does every other living organism. This heart and brain of an Army is made up of the officers composing it, while the soul of it is the spirit that inspires them. The worth of an army must be measured primarily by the character of this soul. In volunteer armies it is little more than embryonic and in its absence armies are but mobs. It is immaterial how numerous they may be, how vast their armament, or how perfect their utensils of war, these things shall avail them not at all."[7]

This spirit is the *morale* of the Army.

Napoleon considered "*morale* to be to the physical as three to one," Marshal Saxe thought "the key to victory lay in the human heart" and Ardant du Picq wrote "centuries have not changed human nature. Passions, instincts, amongst them the most powerful one of self preservation, will be manifested in various ways according to the time, place, the character and temperament of the race."

Mechanization and motorization involve more than a change in the methods of war, they entail radical changes in the kind of men that armies recruit, more especially of those recruited as reinforcements in wartime.

Mechanized armies must consist mainly of men with mechanical duties; and it is not that these will be less brave than the soldiers formerly recruited, but they will be influenced by very different ideas.

In peace, armies which train their own mechanics, can surround young soldiers on enlistment by old soldiers whose minds have been already formed; and so cultivate in them a military spirit. But in war the old soldiers will be engulfed in an inrush of new men, who will impart their ideas to the whole organization; and these will be apt to feel towards their military superiors as the trade unionists have been taught to feel towards their employers and their representatives.

It would be nonsense to connect *morale* and bravery with horses; the infantry have never had horses and it requires more courage to "walk to death" than to "ride to death."—It is however reasonable to connect *morale* with a philosophy of life. War can be given a romantic appeal, if it is connected with heroic charges and glorious triumphs; but it is difficult to do this in an atmosphere of oil, mud, and exploding machinery. But the traditional arms do cherish ideas about war which makes little appeal to military mechanics trapped in their bowels of great iron prisons. The officer can look on the fighting out of the top, but there is little romance for the men clad in dungaree overalls and equipped with spanners and oil cans; they do not see the fighting, but are in constant danger of destruction. The character and temperament of the mechanized soldier will be different from that of the men he is replacing, but driving any pattern of a military motor vehicle in war will probably require, apart from mere physical fitness, a *morale* higher than is required to walk to death in company with one's comrades.

FORMS OF MECHANIZATION

Mechanization may be necessitated by lack of animals or the means of feeding them; but these reasons are of local not general application; and are not sufficient justification for the complete motorization of armies. The deciding factor in a policy of motorization and mechanization should be, whether it will increase or decrease the power of each arm affected to carry out its own special rôle.

The difficulties are common to all forms of military mechanization, but not to the same degree. The mechanization of some services will give very great advantages with few drawbacks. In other cases mechanization may diminish the power of particular arms in their own rôles. It is therefore reasonable to consider separately the case for mechanizing each service.

It is obvious that there is an ascertainable "maximum of mechanization" in an army, beyond which increase will be a disadvantage, not an advantage. Any of the following factors make it necessary to say "so far but no farther"—

(i) What the roads will carry.
(ii) The scale of supply possible.
(iii) The financial expenditure involved.

In Great Britain the decision has been taken to mechanize and largely motorize the standing army. This decision has the merit of simplicity, but entails the disadvantage of making the army comparatively unsuitable for tasks other than intervention as a striking force, on the Continent of Europe or on the desert frontier of Egypt.

Decisions about the progress of mechanization and motorization should be based on:

(a) The "maximum possible of mechanization" that can be maintained and employed in the probable areas of war, and the most effective way that this maximum can be distributed amongst the various arms.

(b) The maximum number of animals that can be maintained and employed in the probable areas of war, and the most effective way that this maximum can be distributed amongst the various arms so as to make it possible to employ "maximum possible mechanization" most effectively.

Armoured fighting-vehicle units, the mechanization of transport, the motorization of dismounted units, the mechanization of artillery and mounted units, are all separate and distinct problems. All that they have in common is that they are all dependent, self-propelled vehicles.

POPULAR IDEAS ABOUT MECHANIZATION AND MOTORIZATION

To the "man in the street" the terms "mechanization" and "motorization" are synonymous with "Tanks"! There is an instinctive feeling that the more "Tanks" etc.—the more powerful the army. Therefore, because fighting vehicles should not have the first call on the "maximum possible mechanization of an army" and because they only represent one aspect of mechanization and motorization, it is essential to emphasize the fact that their claims on the "maximum possible of mechanization" do not come before several other services.

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[7] "The Valour of Ignorance"—Homer Lea.

Mechanization of Transport

In civilized countries commercial transport is now almost entirely mechanical, therefore (in spite of the fact of there still being areas where the mechanical transport is not as useful as animal transport), the problems of re-inforcement and maintenance have made the mechanization of transport obligatory.

The first call on the "maximum possible mechanization" of an army should be the requirements of the transport service, which must take priority of everything. The only non-mechanized transport retained should be that for hill or bush warfare, and a proportion of pack animal transport for cavalry which retains its horses. When cavalry is dependent for its essential requirements on any form of wheeled transport—(and this applies in a marked degree to mechanized transport) its utility is minimized by its loss of mobility, even where good roads are available.

Mechanized vehicles do not become tired, and can carry much greater weights and cover greater distances in shorter periods than animals. But with crowded roads they cannot march more rapidly than pack transport, which moves across country as easily as along a road. The actual area of road space imposes a definite limit to the number of vehicles that any system of roads will carry; and in practice rivers and similar obstacles make it necessary for all transport vehicles to rely on whatever roads are available.

A force which limits its trains to the minimum (whether these be drawn by animals or motor power) possesses an outstanding advantage; and the victorious cavalry of history has always accustomed its personnel to content themselves with a minimum of possessions. With pack animals, that can carry its essential requirements, cavalry can go anywhere.

While taking the weight off the horses, wheeled transport has the curse of encouraging cavalry to encumber itself with too much baggage and impedimenta; it prevents cavalry from operating in countries which are without a good road system.

Heavy loads on troop horses quickly kill them: but with light loads horses will be equally quickly worn out by having to make long marches to reach baggage trains where riders carry the necessaries of their own and their horses' kit and food. While it is easy to wear out animals, even when they start off fit and hard, this is not a sufficient reason for the total abolition of pack transport, which can accompany cavalry units and detachments where vehicles could not go; its inherent advantages are sufficient to balance its disadvantages.

The Mechanization of Artillery

The disappearance of the "bus and van horse" from civil life, has eliminated that former artillery horse war reserve; therefore artillery like the transport will in future be compelled to rely mainly on mechanical traction.

The artillery should have the second priority call on the maximum possible mechanization of an army, and its claims should receive precedence over everything except essential transport.

Mechanization will not have any revolutionary effect on the tactical rôle of field artillery, but it will entail some tactical disadvantages and few advantages. In mobile warfare, horse drawn guns have the advantage of making less noise than tractors do; also there will always be some localities where animal drawn guns have advantages over those mechanically drawn. Although tractors can drag guns to most places that draught animals can take them, a lucky shot may immobilise a tractor for an indefinite period; casualties in a gun team do not prevent the unwounded horses of a team from continuing to move the gun. On the other hand, tractors handle the heavier types of artillery better than animals. "Self propelled artillery" was an invention which offered the great tactical advantage of being able to fire on the move, but unfortunately mechanical and constructional difficulties have as yet prevented the practical developments of this project.

European field artillery has not completely discarded animal traction, and this decision has not been altogether due to inability to provide the mechanization required. It is unlikely that artillery in mobile warfare will be able to dispense with animals completely. As long as possible horse artillery (drawn by horses) should accompany "horsed" cavalry; there are times when mechanized guns will be more of a nuisance than a help to mounted forces.

In mobile warfare officers, scouts, etc., of mechanized artillery units not belonging to the armoured force, will encounter difficulties if they are expected to reconnoitre freely across country, without conveyances other than mechanical ones; in fact they will be seriously handicapped unless some horses are provided for use in emergencies. Vehicles are not always convenient for reconnaissance, nor as the means of locomotion of observing officers. The artillery of an armoured force will have to content itself with vehicles, as in this horses would be an anachronism; but on the other hand it would be quite feasible and logical for mechanized artillery units working with ordinary infantry, to carry a certain number of horses by means of those trailer horse-boxes now so popular with the hunting community.

Where and when artillery has to be used in mountainous country, animals must be used. Mechanization cannot be made applicable to Pack Artillery.

Motorizing Dismounted Units

The fighting power of Infantry (at present the least mobile arm) would be increased by ability to move faster and the possession of a greater radius of action.

Except in hilly, wooded, or swampy country, the old type of marching battalion is losing importance as the fighting arm. Interlocked machine gun fire holds up its attacks; and even in prepared positions, unless protected by anti-tank guns or natural obstacles, it cannot of itself resist fighting vehicles.

The attachment of anti-tank guns, extra machine guns and automatic rifles increases the power of infantry; but it does this at the expense of making it even less mobile than formerly unless it is motorized.

After the essential claims of transport, artillery, and fighting vehicles are satisfied, infantry should have the next claim of the "maximum possible mechanization" of an army.

The old type infantry unit is slow moving; but Reserve M.T. Companies are capable of transporting large forces of infantry long distances. Close coöperation between infantry and fighting vehicle units would be greatly facilitated by the infantry possessing some form of transportation, that would enable it to move to any particular theatre of action at that same speed as the fighting vehicles. Scouts in light cars could however protect its movements. The Boers (like Ghenghis Khan and Timur), made war without masses of foot soldiers, and showed how effective mounted riflemen can be against ordinary infantry. There is no reason why infantry transported in carriers should not be equally effective. Motorized infantry possessing unit conveyances would without question be formidable fighting units, although the connected increase in vehicles, through over-crowding the roads, might nullify the advantages. Infantry is only able to make effective use of vehicles in countries where sufficient good roads and maintenance facilities for mechanized transport exist; elsewhere vehicles would have to be abandoned. Motorized infantry whether it moves in its own conveyances or in lent vehicles must fight on foot, and would have to be trained and equipped to abandon its vehicles whenever occasion demands; otherwise there is a danger that its action would become limited to terrain suited to its vehicles.

Infantry will presumably always be necessary for battle, but vehicles able to transport it from one locality to another have become an essential part of modern armies.

CAN CAVALRY ON HORSES BE COMPLETELY REPLACED BY MECHANIZED UNITS?

Cavalry of some sort is a necessity to armies; it is normally made responsible for:

(a) Reconnaissance (mainly close reconnaissance).
(b) Protection.
(c) Pursuit.
(d) Special missions.
(e) Mobile reserve.
(f) Participation in battle.
(g) Covering withdrawals.

And until such time as mechanized cavalry is able to carry out all of these duties for non-motorized arms as well as for motorized ones, armies must continue to rely, at least in part, on men riding horses.

Inability to use cavalry and to depreciate its power, have ever been marks of the inferior general; the great captains of history have invariably appreciated the power of cavalry.

It is quite true that in a war between France and Germany restricted to their mutual frontier, cavalry on horses could play little or no part. But cavalry in fighting vehicles will not be able to carry out normal cavalry duties either. It would be more logical to weigh the respective merits of horse and mechanized cavalry in an area of possible mobile warfare; as for instance the desert frontier of Egypt and Tripoli.

Even supposing the technical and financial difficulties of mechanized cavalry can be surmounted, the real issue remains: Can mechanized cavalry carry out all or even most of the duties that fall to cavalry in war in the countries where fighting is probable, as well as horsed units can? It is most improbable that anyone could say "Yes" with certainty.

"Many prophets already see the armies of the world transformed into armoured engines, and the horsemen entirely superseded by the motor soldier. Things have not gone so far yet, and we should do well to reckon with present conditions if we would satisfy the demands of the present and of the near future."[8]

The Japanese in China are realizing that cavalry on horses still plays a part in war; and the British in Palestine are bitterly regretting the regiments that were hastily sacrificed to the cult of mechanization.

In Spain at the beginning both armies had fighting vehicles, but were practically without cavalry. However, the Nationalists thought it worth while to raise fifty horsed squadrons during the war. A Nationalist horsed force by an out flanking movement from the North through the mountains, played an important part in the recapture of Teruel; and in the other fighting, men on horses played a consistently important part.

It was only the Nationalists that were able to raise cavalry; because most of the officers and noncommissioned officers of the old Spanish cavalry were fighting with Franco. Even in International Brigades, the Republican armies did not contain the type of officers and men required for horsed units.

Unless it is proposed to fight all future wars with armoured forces only—a form of extremism with which few would advocate—the elimination of the horsed cavalry from armies is not logically essential to the policies of mechanization and motorization. Cavalry (on horses) already possesses the strategic mobility, which is the main advantage to be foreseen from mechanization and motorization. It is however an expensive arm; and its abolition does provide money for mechanization and motorization, that otherwise might not be available. Cavalry also has enemies, who regard "the horse" as the fetish of military reactionaries. The "horse cult" of the former high command, created a considerable number of enemies for the inoffensive horse.

"The utility of cavalry has always been doubted. That is because its cost is high. It is little used just because it does cost. The question of economy is vital in peace times."[9]

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[8] General von Seeckt.

The progress made in the disbandment of "horse cavalry" has been a triumph for some of its enemies. Cavalry takes only a very short time to destroy; but once destroyed many years to reëstablish. The use of second-line Territorial cavalry in war, could only serve to discredit the arm.

Even if anyone be bold enough to maintain that mechanized cavalry can do everything as well or better than men on horses, the claim of the cavalry arm on the "maximum possible mechanization" of an army, should be ranked after the claims of the transport, the artillery, the fighting vehicles and the infantry.

In spite of the advantages of mechanizing the horsed cavalry being more than problematical, "mechanized cavalry" has become an integral part of all armies, and it has come to stay; no matter how often it fails when put to the test, its advocates will claim that such failures are due to transitory faults that science can eliminate in due course. In any case "mechanized cavalry" is essential to an "Armoured Force," although it was not necessary to destroy the horsed cavalry to create it. It is employed on its true task when part of an Armoured Force, and it is distinctly less suitable for work away from it.

It has become the fashion to speak of "Horsed cavalry" "Mechanized cavalry" and "Motorized infantry." Mechanized cavalry and motorized infantry, both owing their mobility to vehicles, are brothers in arms; cavalry owing its mobility to animals is at most a cousin to them. Mechanized cavalry differs so greatly from true cavalry that it is practically a separate arm. The only real link possible beween mechanized cavalry and horsed cavalry, would lie in the possession of a common spirit. This involves the mechanized cavalry being taught to regard the horsed, as their teachers and mentors.

Mechanized units may be ordered to take over ordinary cavalry duties, with non-motorized forces, and may become as mobile as men on horses; but unless they can develop a "cavalry spirit" they will have little chance of becoming cavalry.

Can mechanized cavalry be given the "cavalry spirit"? It is quite possible for a unit to have a high *morale,* without any cavalry spirit whatsoever.

The cavalry spirit is entirely disassociated with discipline, training, science, mechanics, or any other kindred interests; it flourishes naturally among men whose philosophy of life causes them to find enjoyment in risking their lives in field sports connected with horses.

Man may love machines, but a machine has no life; horses have—that is the radical difference. The true cavalry soldier thinks of his horse's well being before his own —it is his friend and companion in danger; he enjoys going to war as long as he goes on a horse. It is a fact that a man while riding a blood horse, seldom has much fear of death. "They are those who love danger, excitement and pace, and who find in the blood horse an animal which shares their love for these, and will generously sacrifice its life and limbs in the co-partnership."[10]

For a few years officers and men of units deprived of their horses may remember they were once cavalry, and preserve certain traditions; but, as new officers and men replace the old ones, unless these continue to be put through the old kind of training and to pass part of their service with horsed units, mechanized cavalry will be absorbed by the armoured vehicle force, just as "grenadiers" (since they ceased to throw grenades) were absorbed by the ordinary infantry.

The cavalry units which have been mechanized are already finding that the old personal system of discipline of the mounted service is having to make way for the more rigid infantry or impersonal system, which is seen at its perfection in the Guards. The cavalry spirit can flourish under discipline that is stern, provided that it is human and flexible, instead of impersonal and rigid.

Even if a true cavalry spirit could be cultivated in mechanized units, the complete replacement of horsemen by men carried in vehicles seems impracticable. There will ever remain much country over which a horse will travel easily and a vehicle scarcely at all. No vehicle has yet been invented which can "take jumps" or cross rough country with the speed and ease of a horse. A patrol which cannot "jump" an obstacle is likely to be captured.

Mobility is the distinguishing characteristic of cavalry. Cavalry should be able to cross any country and to operate anywhere that a horse can put his feet. Battlefield mobility, which is more important than the ability to move fast, involves units being to a great degree independent of transport vehicles.

When vehicles (carrying two or three men) are able to cross (at an equal or even greater pace) all country which mounted men can traverse, the employment of mechanized cavalry with non-armoured forces will have more justification than it has today. But even a vehicle able to cross country like a horse would not solve all difficulties which have to be surmounted by mechanized cavalry.

In emergencies "horsed cavalry" can live on the country; but, no matter how far science minimizes the difficulties of supplying tyres, oil and petrol, etc., these will never be so readily obtained as forage. Also the technical skill necessary, for the maintaining of mechanized vehicles in running order, is much more specialised than that required to keep horses in health; and the technical equipment of mobile repair shops requires far more transport than do veterinary hospitals or remount depots.

The noise made by vehicles is heard for miles and miles, so secrecy of movement is not possible; and even should science eliminate noise, the problem of visibility remains. Vehicles in movement are more conspicuous than horsemen.

Supposing armoured vehicles were replaced by light inconspicuous cars of a high cross-country capability fitted with effective silencers, it would still remain doubtful whether such a force could be relied on for *all* cavalry duties in war.

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[9] Ardant du Picq—"Battle Studies."

[10] "Our Cavalry"—Major General Rimmington.

Mechanized cavalry will be most useful for participation in battle, as a mobile reserve, and in coöperation with other arms in a covering force. Its utility for special missions, or for covering withdrawals, will depend on circumstances. It will be least useful in the rôle of independent reconnaissance. Even if reconnaissance is not regarded as the most important duty of cavalry, a cavalry unable to reconnoitre is of little use. There are times when air-craft cannot reconnoitre at all, and even under the most favourable circumstances they are of little use for close reconnaissance.

Mechanized cavalry is between the upper and nether millstone: the more it cherishes vehicles protected with armour, the less will be its kinship with cavalry, and greater will be its relationship with the Tank Corps; if it discards armoured vehicles it will soon come to partake of the characteristics of motorized infantry. The differentiation of mechanized cavalry from "motorized infantry" in any case is to a great extent artificial, and will probably end by being impracticable.

Despite certain brilliant battlefield victories of the heavy cavalry, the category of cavalry, that has been consistently invaluable from the beginning of time, is light cavalry. This can participate in battle, but its true rôle is detached duties.

Without a strong personnel mechanized cavalry can neither effectively reconnoitre nor defend areas, and on detached duties the tasks are normal. Yet if personnel were so increased to make it able to undertake fighting on foot to the same degree as horsed cavalry, what fundamental characteristic would differentiate it from motorized infantry?

Finally there is the problem of the finance: cavalry will always be cheaper to maintain than a mechanized mobile force of equal striking power.

Armoured Fighting Vehicle Units

Tanks and other fighting vehicle units now form part of all armies; this new arm, while firmly established, seems as yet unable to act without the coöperation and protection of other arms.

Fighting vehicles require time "to prepare for action," and carefully thought out arrangements for deployment. While possessing fire power, *they can only attack;* and their ability to act against consolidated positions is limited by a number of factors. They can no longer just crash through a defended position. The bullet of the modern anti-tank rifle can under favourable conditions pierce the armour of ordinary fighting vehicles, which no longer possess the invulnerability that was originally theirs.

They cannot defend positions or hold captured ground; in fact at rest, they cannot even defend themselves. This is one of their greatest weaknesses.

When forming part of a force defending a position, they are best held in reserve for counter-attacks and for action against hostile tanks.

They can cover long distances at a stretch, and (in favourable weather) move across difficult country; but their action is limited by the problems of supply and maintenance, and by the train of park and workshop impedimenta that has to follow in their wake. They require periodical refilling with petrol and oil, and time for essential overhauls. Their mobility cannot exceed that of their accompanying transport.

Under normal conditions the noise made by a mechanized column is audible for miles and miles; even under the most unfavourable conditions it can be heard for a very considerable distance. However within certain limitations aeroplane engines may be used in emergencies to deaden the noise. The visibility of vehicle columns by daylight is marked, and the practical difficulties of movement after dark, are considerable, routes chosen require careful reconnaissance. Such factors largely mitigate the element of surprise.

"The exponents of mechanization say the tank is the solution of the problem of how to make the attack easy and profitable. The tank is no such thing. It is a weapon of opportunity, to be used rarely and by keen eyed men who know its limitations. It is short sighted, noisy, necessarily nervous even if manned by brave men, and a bad gun platform when moving. When stationary it is a good target for artillery, and if within reach of opposing infantry it can be stalked."

"The verdict of Spain—which I believe will also be the verdict of the next great war—is not that the tank is an utter failure, but that it has restricted use as a weapon of opportunity. Tanks cannot possibly—whatever size you make them or however many you make—replace infantry as the basis of an army, because they cannot hide as infantry do, go to ground, become dangerous vermin hard to brush out of the seams of the soil."[11]

Tanks and other fighting vehicles are really a modern and far more mobile form of the ancient arms of elephants and war chariots, which disappeared from battlefields hundreds of years ago. They have, even comparatively speaking, far greater combat value than elephants and war chariots ever possessed, but the tendency is to exaggerate this effectiveness, as was formerly the case with the chariots and elephants.

Modern science has so improved communications, that (although individual tanks deployed for action are sometimes difficult to communicate with) a modern mechanized force is probably more subject to a practical personal control than any other arm. Fighting vehicles, unlike elephants and chariot horses, do not have wills of their own; so cannot disorganize their own armies by turning to flee, even despite the wishes of their drivers.

Where—owing to a paucity of troops or other reasons—frontiers have to be defended by a series of consolidated localities with intervals between them, or where a lengthy front is not defended in equal strength throughout, armoured forces may be able to break through the defence and—by reason of their great speed of movement—penetrate to a very considerable depth into the territory being so defended.

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[11] "English Captain"—Tom Wintringham.

Where the defender has ample reserves and is not for instance engaged in a general retirement nor committed to a large scale offensive, such attacks (while perhaps momentarily achieving spectacular success) are likely to end in disaster through being surrounded, isolated, and destroyed.

But where enemy reserves are not free to concentrate for counter-attacks against attempts of this nature—owing perhaps to being already committed to support a general offensive or retirement—the unexpectedness and rapidity which should characterize the action of armoured forces may result in very great moral and material damage. This rôle of an armoured force remains largely theoretical until the test of actual war shows its practical possibilities.

Coöperation Between Armoured Units and Non-Armoured Units

There is no school of thought that is opposed to all projects of mechanization and motorization; everyone realizes that these have come to stay and as long as warfare is mobile will tend to increase. The controversies relate to the rate of progress desirable and to the degree to which it is to be carried out, prior to it becoming apparent whether warfare will be static or mobile.

Should the conditions of the trench war of 1915-'18 on the Western Front repeat themselves, fighting vehicles will not find they have an easy task if asked to break through defended fronts consolidated to the depth that has now become normal. Armies whose training has habituated them to visualize warfare as the occupation of a defended frontier will be at a disadvantage if they are suddenly called on to take part in a war of movement, because the more an army digs itself in, the less mobile become its habits. *Mobility has ever been a marked characteristic of victorious armies.* Fighting vehicles in so far as they can be used to break up static warfare will be of inestimable value to armies which wish to keep warfare mobile.

Formerly ordinary field guns were not particularly deadly to fighting vehicles, and bullet-proof vehicles could treat machine gun and rifle fire with contempt. But the experience of recent fighting in Spain has shown that anti-tank guns are very deadly foes. However the anti-tank guns are difficult to conceal and are very vulnerable to attack. Besides these there are land mines.

The ability of fighting vehicles to cover considerable distance in a short time makes them particularly suitable for turning the flanks of entrenched positions. A position that can be turned does not remain an impossible obstacle. Except where the national frontiers have been transformed into continuous entrenchments, with flanks resting on the sea or neutral States, there are usually flanks that can be turned.

There is general agreement that mechanized arms must work in coöperation with non-mechanization arms, *and that they should not be their rivals but their partners.* Elephants and chariots used to coöperate with other arms, and there is no reason why modern fighting vehicles should not do the same. Non-motorized infantry carrying on any continuous coöperation with an armoured force, must be provided with conveyances.

Tanks can be particularly useful in destroying hostile machine gun nests and in capturing particular points that the enemy are endeavoring to consolidate.

Fighting vehicles at night need complete protection. *They will be at their best when coöperating with mobile troops given a protective rôle; they are then sure of protection when at rest, because they can fall back and take cover behind the outposts.* To mobile troops on a detached mission, fighting vehicles are a responsibility except while actually on the move during daylight. But the "motorized" divisions and the armoured divisions contain their own protection in the motorized infantry that forms part of them.

Even when protection, supply and maintenance problems are not acute, the activities of armoured fighting vehicles are most profitable in areas where the terrain and roads permit of their free movement.

Conclusions

Mechanization and motorization should have a limited and two-fold objective:

(i) To increase the fighting power of armies, and

(ii) To increase their mobility.

Only so far as they further both these aims, is the intensification of mechanization and motorization desirable. Any factor lessening either of these aims, decreases the military utility of mechanization and motorization.

An army which may be called upon to fight in any part of the world (against enemies who may be regular, irregular or even internal) can not light-heartedly put all its eggs in the basket of mechanization, like armies, whose responsibilities are well defined and limited by geographical factors.

When armies must be capable of fighting anywhere, theories based on conditions applicable only to particular localities, should be regarded with distrust; hostilities will certainly continue to occur in areas quite unsuited to highly mechanized armies. The present British Army is organized for a war against a first class European power. However, in the end, the real fight for the preservation of the British Empire *will probably occur in the East.*

Radical changes should be based on proved practical tactical experience, and only given effect to after the administrative limitations entailed by protracted hostilities have received full consideration.

While mechanization has come to stay, fighting vehicles *have not yet established themselves as the only decisive arm.* Military transport must be almost entirely mechanical, but the mechanization and motorization of the fighting arms should be undertaken more cautiously. The new arm of mechanized cavalry has not as yet proved its capability to take over all the work of men on horses, and to a minor degree this applies to other arms and services.

When deciding the degree of mechanization and motorization which is desirable in an army, the following should receive full consideration.

(a) The continual improvement in the mechanically propelled cross-country vehicles.

(b) The actual area of the road space available in areas where there is probability of war, and the strength and stability of the roads, bridges, etc., that will have to be made use of. There is no use in taking into any area more vehicles than there is actually room for on the roads.

(c) The relative vulnerability of entirely mechanized armies and non-mechanized forces to intensive air activity, including gas attacks by bombing and spraying.

(d) The "maximum possible" of mechanically propelled vehicles which it is possible to maintain in repair, and to keep supplied with petrol, oil and tyres, in the areas where there is possibility of war.

(e) The proportion of the "maximum possible of mechanization" shown in (d) that must be allotted to the transport service.

(f) The proportion of "maximum possible of mechanization" in (d) that must be allotted for artillery traction.

(g) The proportion of the "maximum possible of mechanization" that must be allotted to fighting vehicles, after all essential transport and artillery requirements have been satisfied.

(h) The degree to which improvements in anti-tank weapons have reduced the utility of armoured fighting vehicles.

(i) The claims of the least mobile fighting arm—the infantry—for some proportion of the "maximum possible of mechanization" shown in (d).

(j) What proportion if any of the "maximum possible of mechanization" shown in (d) will remain available for "mechanized cavalry."

(k) The exact stage at which mechanization makes the army's mobility less and less, instead of greater and greater.

(l) The effect which complete mechanization and motorization will have on the *morale* of fighting forces.

(m) The extent to which the desire to economize at the expense the "horse" (as the fetish of the reactionaries) in favor of increased motorization and mechanization, is providing a driving force behind the projects of abolishing the horse cavalry.

☆ ☆ ☆ ☆

The motorization of armies is one of the most important questions of military development. It may be briefly pointed out that for the time being roads, bridges, forests and mountains still oppose mass employment of motor vehicles.—General von Seeckt, late Commander-in-Chief, German Army.

Leadership Tests Mechanized Cavalry

The Mechanized Cavalry participated in the annual leadership tests for small cavalry units for the first time since the inauguration of the tests in 1925.

Although, in general, the usual features for these tests were prescribed, a number of new and different requirements were instituted to cover the tactical and administrative problems faced by this member of the Cavalry arm.

The general instructions issued by the War Department stipulated:

> Each combat car troop shall enter one combat car platoon with three combat cars and two motorcycles in this competition.
>
> The test shall be divided into two phases:
>
> (a) *Individual Test for Platoon Commanders:* To demonstrate the endurance and ability of the officer acting alone. This test shall be drawn up in detail and officers failing to attain 75% shall be eliminated from further competition.
>
> (b) *Leadership:* To demonstrate the qualities of prompt decision, aggressiveness and ability of the officer as a leader, as evidenced by the proper training of his men. The preparation and conduct of this part of the test will be such as to require the demonstration of the above qualities.
>
> Each platoon shall have the following composition:

One lieutenant	Transported in combat cars.
Two sergeants	
Two corporals	
Seven privates	
One private (messenger)	Transported on motorcycles.
One private (maintenance)	

Qualified substitutes may be permitted, but there will be no change in the composition of the platoon after the test starts.

The two phases (individual test for platoon commanders and leadership) shall be weighted in about the ratio of one for the first to three for the second.

The platoon should be turned out in full field equipment, including one cooked ration and extra gasoline in drums on vehicles.

Approach March

Competing platoons should be considered as operating in enemy territory.

Hostile ground and air forces should be active.

A night march of about 60 miles in 3 hours.

Firing with ball ammunition should include fire from moving vehicles on stationary targets, fire from stationary vehicles on moving targets, and close-in defense of the vehicle by use of the Thompson submachine gun.

Knowledge and ability of the platoon to maintain mechanical efficiency of all equipment.

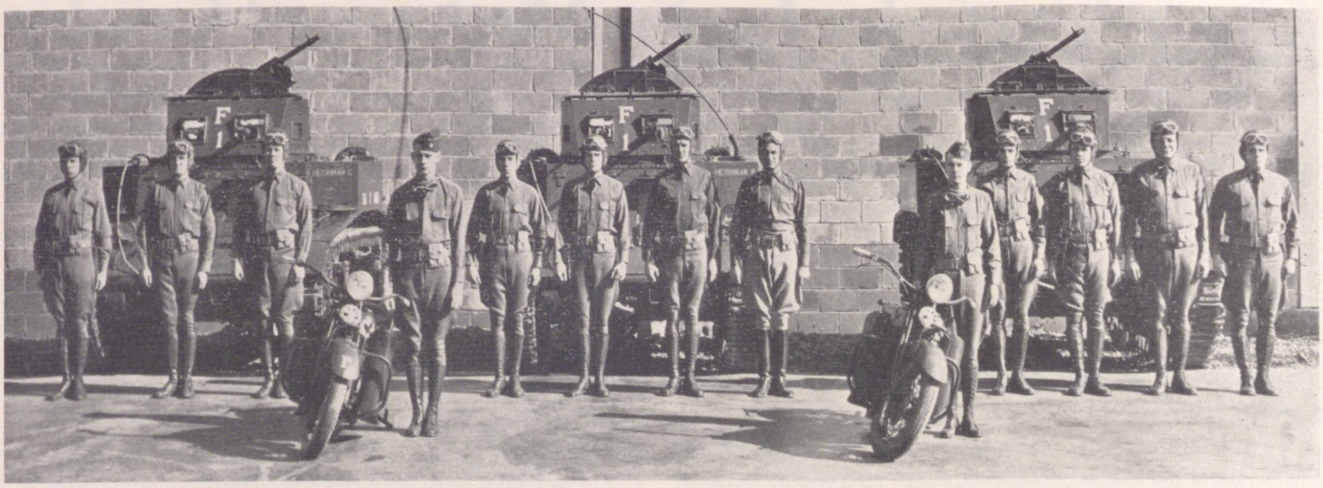
The following items should be noted:

> The technique of marching, including march discipline, rates of march, inspection of cars at halts, and maintenance of vehicles on the march.
>
> Condition of vehicles and equipment.
>
> Map reading.
>
> Orders; how given.
>
> Tactics involved, vigor, rapidity, initiative, mobility, simplicity, objective kept constantly in mind, cooperation between vehicles.
>
> Cross country ability, use of cover from ground and air observation.
>
> Control of platoon while in motion.
>
> Effectiveness of the platoon in the assault.
>
> Advancing attack by fire and movement.

Live Ammunition. One or more combat situations involving the use of the caliber .30 and caliber .50 machine guns and Thompson Submachine Gun should be made a part of the test. An allowance of 2,000 rounds of caliber .30 and 400 rounds of caliber .45 ammunition is now authorized by AR 775-10 for use during the test for each of the regiments, to be divided equally among the competing platoons. Of this amount, sufficient should be converted to allow 10 rounds of caliber .50 ammunition per car.

In carrying out the general provisions of the War Department Directive the local Board of Officers conducting the tests prescribed:

> *For the individual phase:*
>
> TIME. Each platoon commander, properly equipped will report to the motor park fifteen minutes prior to his starting time. Starting order will be drawn for by lot on the previous day. Contestants will start at 8:00, 8:30, 9:00, 9:30, 10:00, 10:30, 11:00 and 11:30 A.M. respectively.
>
> EQUIPMENT: *a.* Contestants will wear service uniform, equipped for the field, including crash helmets.
>
> *b.* Each contestant will report with his assigned combat car, its regular driver, all vehicular and individual weapons, 3 rounds cal. .50, 20 rounds of cal. .30, 25 rounds of cal. .45 sub-machine gun ammunition, and 21 rounds of cal. .45 pistol ammunition loaded in drum and magazines, respectively. He will be accompanied by his regular messenger on a solo motorcycle.



TROOP F, FIRST CAVALRY, WINNING PLATOON IN CAVALRY LEADERSHIP TEST FOR SMALL UNITS
Lieutenant Philip H. Bethune, Sergeants Robert E. Hutchins and Joseph K. Mohney; Corporals John C. Dalton, Britton E. Fry (absent from photograph); Privates first class James M. Glen, Claude R. Heishman, Robert L. Heishman, and Omer J. Snyder; Privates Harold B. Cole, Harry L. Mefford, Charles E. Strong, Harry R. West, and Lincoln W. Cole.

PROCEDURE. *a*. Fifteen minutes before starting time, the starting judge, an officer, will inspect the contestants' vehicles and equipment, and will record the time of start.

b. On being released at the start, contestant rides as car commander, being trailed by the motorcycle. He is accompanied in the car by his personal judge, an officer. All his machine guns are entirely unloaded. He moves out First Avenue to the road junction just west of Forest Hill, and passes over the TOP of Forest Hill moving at at least five miles per hour in the direction of the third runway from the north, which will be flagged. When the moving target appears he will halt, load his cal. .50 machine gun, and fire three rounds at the 6 x 12 target. The first round will be tracer, the others will be ball. He will fire while the target is moving only and while it is between the two black and yellow checkered markers. (Score, 5 points for each hit.) Having fired his cal. .50 ammunition, he will proceed to and down the flagged runway at at least 15 miles per hour. Five silhouettes will appear above the pits, at which time while moving at 15 miles per hour, he will load and lay his turret cal. .30 gun and fire at them. The targets will be exposed for forty-five seconds. (Score, five points for each silhouette hit.)

c. As directed by his personal judge, the contestant will halt at the end of the runway and clear his guns. He will then change places with the driver and timed by his personal judge will drive his car over the route: Forest Hill—manure dump—Red barn—flagged course to OP No. 6, where he will halt his car with the front of its left track within one yard of the largest red flag planted there. (Score, one point per minute under par, with a penalty of two points for minutes over par.)

d. Contestant will then change places with the driver and have all ports closed, leaving the turret top open. The car is assumed to be stalled. At some time after he reports ready, he will see a silhouette appear at close range, followed at intervals by four others, irregularly spaced. As the first one appears he will load his sub-machine gun, open a pistol port, and fire on the targets. Maximum extent of whole exposure, forty-five seconds. (Five points for each silhouette hit.)

e. Contestant will then mount the motorcycle, and, on signal from his personal judge, will ride alone north on the Wilson Road to its intersection with Dixie Highway (Mom's and Pop's), where he will check in to a noncommissioned officer. He will then turn around the red flag and return via Wilson Road—Roosevelt Ridge Road to Red Barn. His start on this ride is timed by his personal judge, his finish by number 6. (Score, one point per minute under par, with a penalty of two points for each minute over par.)

f. Contestant without delay will start on foot for the 13th Cavalry pistol range, time of start being recorded by Judge number 6, and time of finish by his personal judge. (Score, one point per minute under par, 4 points per minute over par.)

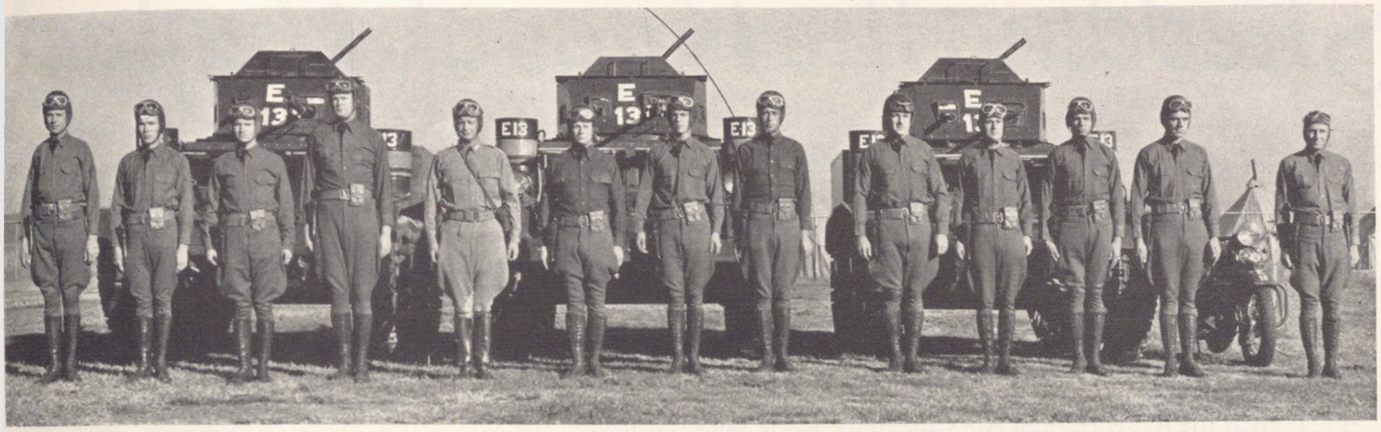
g. Immediately upon arrival at pistol range contestant will be confronted with seven bobbers simultaneously which will be exposed for twenty seconds. In this time he must load and fire. (Score, five points for each bobber hit.)

h. Contestant will then mount his car with his personal judge and himself drive without time limit to the entrance to 1st Cavalry motor park where he will make an oral report of his operations to Judge No. 8, an officer. (Score, 10 points based on completeness, accuracy, and coherence of the report.)

For the collective phase:

The Board issued several situations through which platoons were to be kept in marching tactics and fire column.

For the night march and bivouac the following situation was issued: (ED. NOTE: No maps are reproduced in The JOURNAL as their use is not believed essential.)



TROOP E, THIRTEENTH CAVALRY, WINNING PLATOON IN CAVALRY LEADERSHIP TEST FOR SMALL UNITS

Lieutenant Karl T. Gould; Sergeant Rudolf Koranchan; Acting Sergeant Lloyd H. Brandt; Corporals Cecil C. Carpenter, and Earl F. Baird; Privates first class Dennis S. Brooks, Kelly M. Burks, Joseph L. Houchin, Aloysius R. Jacobs, George Kelly, John C. Kirkland, and Eugene J. Ward; Privates Andy Galayda, Jr., and Harvey B. McLean (absent from photograph).

Hostile aviation has appeared during the night.

Enemy armored cars have been reported operating in the vicinity of BM 702 (2½ miles north of Fort Knox).

The troop moves via STEELS CROSS ROADS to a concealed bivouac in the vicinity of EASY GAP.

Your platoon will be the advance guard for the troop. Route as shown on attached map.

Rate of march 8 miles per hour.

Troop will follow advance guard at 5 minutes.

Upon arrival at bivouac area go into a concealed position and protect the troop from any threat from the west on the Porter River Road.

March and bivouac without lights. Every precaution will be taken to prevent observation on the march and in bivouac.

For approach march and combat the following situation was issued at the bivouac:

"Small infantry group in position defending disabled vehicle vicinity of FOREST HILL move to vicinity of RJ 7th Avenue and Wilson Road and from that vicinity gain contact and destroy this force."

NOTE: *Movements north of Porter River Road will be with ports closed.*

For the fire problem the following situation was issued at FOREST HILL:

"Move your platoon at once via POLE LINE ROAD (just east of Wilson Road) to the vicinity of junction of LINCOLN ROAD—WILSON ROAD and cover the advance of the troop to OP No. 6."

Accompanying Platoon Judge will warn platoon commander that he may expect a close in attack along his route of march.

Winning platoons:

First Cavalry: Platoon of Troop F, commanded by 1st Lieutenant Philip H. Bethune. (See photo.)

Thirteenth Cavalry: Platoon of Troop E, commanded by 1st Lieutenant Karl T. Gould. (See photo.)

Conclusion:

The value of these tests to the mechanized cavalry may be summarized by the comments of Brigadier General Adna R. Chaffee, commanding the Seventh Cavalry Brigade, who stated: "This test furnished, in my opinion, a fine criterion on which to judge the comparative training proficiency of combat car platoons and their leaders. It was comprehensive, exhaustive and difficult. Participation in this test was of great benefit to this command."

Shedding the Rags of Neglect

By Major Reginald Hargreaves, M.C.

Blow, blow thou Winter wind,
Thou art not so unkind
As rain's ineptitude.
SHAKESPEARE. (Adapted).

For a good many generations the Cinderella of the Bellona family was military geography. Over and over again, hostilities were embarked upon and campaigns set in motion in complete ignorance, or with inconsequent disregard, of the geographical peculiarities of the terrain in which they were destined to be waged.

When, for instance, war was declared between Russia and the Franco-Turco-British allies in 1854, and the project of a landing on the Black Sea littoral came up for consideration, in one of his interminable memoranda Prince Albert very sapiently remarked, "The first difficulty is the absence of all information as to the Crimea itself." Nonetheless, undeterred by the complete lack of any maps of the projected theatre of operations and totally unperturbed by the universal ignorance prevailing as to the predominant climatic conditions, an expeditionary force was sent on its way. The landing effected, it was not long before all ranks came most bitterly to regret the irresponsibility with which responsible authority had committed them to a "cockpit" possessed of almost every handicap calculated to retard and discommode war's swift and successful prosecution.

But for all the obvious lessons embodied in the Crimean experience, the need for the especial study of military geography, as forming part of the training of any officer desirous of achieving a real mastery of the essentials of his calling, was a long time in finding general recognition. Even with the 1914-'18 conflict—although General Sir Henry Wilson and a small band of staff officers had given the area destined to become the Western Front a thorough pre-war survey—the expeditionary force detailed for the investment of the Gallipoli Peninsula was supplied with no more than the sketchiest "Intelligence" as to its future field of operations; while such few maps of the terrain as were available did more credit to their cartographer's imagination than to his bias towards a niggling but helpful accuracy.

Since those days, however, the attention devoted, and the importance attached, to military geography has been an increasingly prominent feature in all training *curricula*. Today, this important branch of the science of war has shed the rags of neglect to which—poor Cinderella that it was—it had been so long condemned and taken on the normal garb which places it on terms of equality with all the others of Bellona's numerous offspring.

But the shabby garments of disregard have not, alas, been cast into the fire of merciful destruction. Another Cinderella, has arisen to inherit them, and to wear them with that same air of patient, long-suffering reproach as characterised her erstwhile sister in misfortune. And the name, for short, by which this modern Cinderella goes is *military meteorology*—as expressing what we mean when we refer to the influence imposed by weather conditions upon the pursuit of military operations.

As Lamartine has pointed out, "Nature is not made up of soldiers and civilians, but of human beings." In other words, although the soldier is trained to bear stoically with conditions calculated to reduce his civilian brother to a state of complete demoralisation, a time may come, a condition of things may arise, when the natural man in the seasoned warrior demands consideration for his inherent friability; when, flinging aside the armour of discipline and cultivated innurement, stark human nature cries a halt. And as it is with the man, so it is to an even larger degree with the instruments of his calling, all the vast but highly-sensitive impedimenta of conflict by which the soldier is served, supported—and encumbered! Moreover, throughout war's variegated history, such an arbitrary halt has no less frequently been imposed by adverse weather conditions than as the outcome of successful hostile action.

Yet the scientific study of meteorology plays practically no part in the training of the command for war.

It is true, of course, that the commander rarely, if ever, possesses any range of choice as to the particular "cockpit" wherein his campaign shall be fought out; a range which, if it could be his, would enable his selection to fall upon a terrain in which the climatic conditions promised to provide the minimum of impediment. He can only accept the theatre of operations dictated by ineluctable circumstance, complete with its climatic aids or drawbacks, as the case may be. But once that "cockpit" has been designated, he can, if his peace-time "Intelligence" has been functioning properly, envisage the climatic conditions under which his campaign will probably be waged. Further, not only can he plan the course of operations so as to conform with the probable graph of meteorological conditions, but he can take such steps as should ensure that the troops under his command may experience the minimum of devitalisation, sickness and inconvenience through the incidence of known climatic trends and possible, but reasonably predictable, climatic vagaries.

* * *

In the brave days of Tallard and Marlborough, as earlier, the commander's problem was considerably simplified owing to the admirable custom, so soon as the weather broke, of "going into winter quarters."[1] But as wars enlarged in scope and size, and as the pressure on national economics they exerted increasingly demanded that they should be "got on with" with the utmost intensity, even when their actual prosecution temporarily approximated to an impossibility, the annual recuperative pause in winter quarters showed signs of disappearing permanently from the scheme of things. Wars were becoming so costly to sustain that the soldier had to keep the field in the faint hope that he might be able to surmount climatic handicaps and somehow or other be in a position to "get on with it."

Napoleon, *par example,* feverishly drove his men to their task of overwhelming their opponents, whatever meteorological drag-chains his operations had imposed on them. But the Emperor was fully alive to the important, possibly decisive, part played in military enterprise by weather conditions; nor was provision to help mitigate their penalties absent from his calculations. Even for that Russian campaign of 1812 which was the occasion of his initial undoing, extra warm clothing and liberal supplies of spirits had been furnished against the anticipated cold. It was less, therefore, that the pains and penalties of a Russian winter had not been visualised, than because unanticipated delay—caused by the tardiness of the advance of the Grand Army's right wing, under the little Corsican's brother, and the protracted halt in Moscow itself—brought their full fury to bear upon a demoralised force on a naked and wickedly exposed line of retreat. In short, timing had been at fault rather than the meteorological calculations of a man who had made the discovery that—in his own words, "In war, the fourth element is—mud!"

Wellington, too, drove his men not a whit less hard. But the Duke's early experience of the climatic vagaries of India had provided lessons never absent from his mind. Where operations upon European soil were concerned, no British Army until that of the peninsula had been half so well "found" as that which, even so, took up what was remarkably like "winter quarters" behind the lines of Torres Vedras.

But such meteorological calculations as characterised the plans of Wellington and Napoleon were matters of entirely personal excognitation. They received no codification; they were subject to no staff analysis; they created no precedent, alas, for the guidance of subsequent commanders. For, had precedent ensured that an efficient meteorological "Intelligence" should be in existence, prior to the launching of the Crimean enterprise, to furnish a reliable climatic "appreciation" of the designated *terrain-de-campaign,* not only would it have been apparent that a *Blitzkrieg* of great intensity would be required to reduce the fortress of Sevastopol before winter set in, but great coats and similar "comforts" would have accompanied men quite obviously predestined to campaigning through winter months which were liable to prove severe in the extreme.

Again, in South Africa, (1899-1902), a little clear thinking ahead on meteorological lines would have concentrated the earlier strategy on an attempt to secure the available railway system. Thus the always-difficult transport question would have avoided the well-nigh insoluble problem of effecting crossings over fords and drifts submerged under many feet of winter flood water. The earlier provision of khaki *serge,* in place of that khaki drill, clothing, which last-named proved so inadequate against the driving rain and bitter cold of the high veldt, would also have been the outcome of an informed and careful envisagement of the projected campaign's climatic variability.

* * *

One commander, however, of whom it may safely be said that his plans were invariably governed by strong meteorological considerations, was the late Lord Wolseley. When, in 1870, as Colonel Garnet Wolseley, he was given command of the Red River expedition in Canada for the subjugation of the rebellious Louis Riel, his first enquiry was as to the climatic conditions the enterprise would be liable to encounter. Investigation revealed that the period during which the expedition could hope to keep the field was strictly limited. No start could be made until the ice on Lake Superior had melted, which usually happened early in May; while the return to civilisation must be well under way before the approach of the October frosts.

Armed with this knowledge of what might easily prove the governing factor in his operations, Wolseley planned his movements in strict accordance with the climatic limitations imposed upon them. With a rigid time-table governing the passage of each section of advance, the route was divided into three stages—all over unexplored country—the final one being considerably longer than Napoleon's march from the Niemen to Moscow. With every detail regarding baggage and supplies worked out beforehand, with the loads for each individual canoe to be employed during the river passage—with its 47 portages, some over a mile in length—meticulously calculated, the commander's schedule for the advance was adhered to with machine-like precision. Fort Garry, the expedition's final objective, was reached if anything a little ahead of time.[2]

The military purposes for which it had been dispatched were discharged with exact punctuality; and the whole force—less the militia battalions left behind as garrison—was back in Quebec before the earliest frosts had nipped the first leaves from the trees. Climatic conditions which might well have brought, if not actual disaster, at least the most appalling privation and distress on the expedition, had been circumvented by virtue of the very fact that they had been foreseen, calculated for, and given no chance to impose their malignant influence.

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[1] It was Marlborough's reprehensible habit of continuing to prosecute the campaign on which he was engaged long after his opponents had elected to regard operations as seasonally closed down which materially helped to gain "Corporal John" that reputation for originality and daring he lived so magnificently to substantiate.

[2] Wolseley's passion for strict adherence to a carefully worked-out time table is well exemplified by the memorandum he wrote in London, in 1882, prior to leaving to assume the command of the expedition against Arabi Pasha in Egypt. In this document he affirms that the decisive action will be fought at Tel-el-kebir, on a date between September 13th and 15th. The battle was actually fought and won on the night of 13th-14th of that month.

Wolseley, indeed, may fairly be regarded as the prime apostle of "time table" operations as a means of robbing meteorological conditions of their chance of victimisation. For, three years later he was sent to command the expedition for the subjugation of the rebellious King Koffee of Ashanti. Again his preparations for an advance through fever-ridden, unknown and unbroken bush country, under gruelling meteorological conditions, which were known to intensify at certain seasons of the year, were a pattern of forethought and method. They even included—to the horror of the War Office pundits and the Savile Row tailors—the provisions of an especial "active service" uniform of loose-fitting hodden grey, in place of the heavy, constricted, sweltering scarlet-and-blue of tradition.[3] As in 1870, careful forethought, especially with regard to "short-circuiting" the worst of the climatic conditions to be encountered, enabled the expedition to accomplish its object with exemplary "neatness and dispatch." "Time table" warfare had again got the better of all the elements, human and meteorological, by which it had been opposed.

Wolseley's operations, of course, were of a definitely limited character; their purpose could, with careful planning, be achieved within a definitely limited period of time.

With war on a larger scale, the scope of which must obviously entail the continuance of the armies in the field over a period of years, planning to avoid the interruption of active operations by adverse climatic conditions becomes infinitely more difficult. Even so, the conclusion inevitably arises that meteorological conditions have too often played an insufficient part in the planning-ahead to which general staffs have devoted their energies and imagination.

* * *

It is unfortunate, of course, that the need to gather in and assay the quality of the year's harvest too often delays the commencement of hostilities until the late summer. August and September are bad months in which to start active operations—at least where the majority of available "cockpits" are concerned. If, as so often happens, no decisive victory results from the opponents' first clash, winter conditions are upon them before a second effort can be organised which, if unimpeded, might well serve to bring about a swift decision. Unfortunately, it is so rarely unimpeded. Thereafter ensues a protracted period of climatic interference with practically all liberty of action—in the air as on the ground—wherein war of movement ceases; trench warfare sets in, and sporadic raids just serve to keep the enemy guessing and help in some measure to preserve the *moràle* of the troops engaged in them, threatened with that stagnation and "war-boredom" which "house-keeping" for long periods in the line is prone almost inevitably to induce. Even so, it is rarely that the mean-average of local climatic conditions is made the subject of a careful analysis; an analysis which would at least present the staff with a graph of "possible" and "probable," (as well as a great number of "impossible"), periods wherein minor enterprises could be essayed with a reasonable hope of avoiding meteorological interference.

In such analyses, of course, *certainty* could play no part; but *probability* undoubtedly could. Their painstaking production should, therefore, be given the most careful consideration.

For example, the Operations Branch was aware that the known weather characteristics of the Flanders autumn would put a definite period to the active prosecution of the (since much-criticised) British offensive at Passchendaele in the fall of 1917. It was an offensive which everyone was aware would just "drown out" if carried on beyond a certain date marked on the calendar. What, however, is less well known is that, at the urgent request of the British Navy—who were most anxious that, at all costs, the Army should so batter and drive back the enemy line of defence as to bring about the evacuation of the German U-boat bases on the Belgian coast—and the equally urgent demands of the French—with a temporarily mutinous and demoralised army on their hands, from whom all hostile attention must be deflected—the Passchendaele offensive was grimly sustained long after anticipated climatic conditions had rendered its successful prosecution, *as a purely progressive military operation,* a patent impossibility. It follows that, from the point of view of a successful offensive, the effort was a signal failure. But its dogged continuance in the face of foreseen climatic conditions of appalling severity, at least afforded time for the British Navy to evolve a method of dealing with the U-boat menace—at its worst in the autumn of 1917—and opportunity to the French to restore the queasy *moràle* of their armies, shattered by Nivelle's costly and unfruitful offensive on the Chemin-des-dames. The fact that "policy" necessitated the continuance of military operations long after their active prosecution had been scheduled to cease, in no way reflects on the meteorological forethought which had anticipated and designated a specific date for their termination.

* * *

In the spring of the year following, it will be recalled, the Germans staged an offensive which drove the British from their forward defensive zones, battered them into retreat, and only halted at the outskirts of the important town of Amiens. But no research has yet disclosed whether this intensive, large-scale German offensive was accidentally or deliberately timed to take advantage of the seasonal fogs which so enormously facilitated its initial onrush.

Fog, especially the early morning ground mist variety, invariably proves a better friend of the assault than of the defence; especially if the former is resolutely pushed on, unhesitatingly and without too much concern as to where.

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[3] In this, Wolseley had been only slightly anticipated by Lieutenant (subsequently General Sir) Harry Lumsden, who, in 1846, had clothed the famous regiment of guides he had founded in a loose-fitting garb of khaki, evolved by rolling long strips of coarse native linen in the yellow river mud.

precisely, it is going, so long as it is kept going forward and continues to penetrate further into its opponent's territory. So much is this so, indeed, that the creation of artificial fog—i.e. smoke screens—to shroud the movements of the advance has become a legitimate and oft-utilised device of war. But this, in turn, is dependent upon weather, since an unfavourable wind will render its employment out of the question.

At all events, with the German offensive of March '18 a slowing-down of the advance was unmistakably noticeable after the first two days of assault; a slowing-down partly attributable to the stiffening of resistance and the falling off of pressure in the attack, but nonetheless a slowing-down appreciably greater than would probably have pertained had earlier conditions of fog persisted.

Incidentally, one of the very few instances where the offensive failed to benefit from the incidence of fog to the extent to which it should was the Crimean battle of Inkerman—the "Soldiers' Battle." Thick mist and drizzle materially helped in the initial Russian onslaught; but so stubborn, if confused, was the British defence, and so lacking in *élan* and determination to "push home" was the attack, that Russia's climatic ally exerted its helpful powers to remarkably small purpose. It may fairly be said in this instance that the Muscovites could say, with Shakespeare, "The fault, dear Brutus, is not in our stars (or fog!) but in ourselves!"

The new feature of aerial combat and reconnaissance, combined with the introduction of gas, during the 1914-'18 years, to direct ever-increasing attention to the question of meteorological influences operating to aid or hinder a projected stroke or counter-stroke. And there were thoughtful soldiers a-plenty who insisted that with the ever mounting increase in the sheer impedimenta and machinery of war—impedimenta which was intended to be war's servant but all too swiftly proved itself its master—crowding roads never designed to carry such a burden, and weighing down the individual soldier condemned to carry about with him the incessantly multiplying apparatus of destruction and defence, weather conditions would one day come to play the decisive part in the formulation of the plans of campaign. Vastly increased *matériel,* (too often a source of embarrassment rather than of strength), coupled with an enormously swollen expenditure of ammunition, they insisted, left the fighting line more and more at the mercy of its system of supply. For the successful maintenance of this, unlimited transport was a *sine qua non*. But transport, in its turn, was at the mercy of the roads it had to traverse. And roads—in which must be included narrow-gauge railways—were no less at the mercy of the weather which could, in its more malignant moods, put them, to all intents and purposes, out of action.

In which particular, not the least among the climatic enemies with which the supply services had to contend was the element of frost—or, more particularly, the dangerous period of thaw which followed in frost's delusive train. Then it was remarked that road surfaces were prompt to split and crumble; particularly *pavé,* whose stone-sett edging broke away and intermingled with the earth marge until only a narrow ribbon of shifting and unreliable camber remained. Moreover, for at least ten days after thaw set in, horse-standings and gun-pits mysteriously dissolved in quagmires of half-frozen slush, while trench systems caved in convexly, bearing down their own revetments, in a huddle of icy water, twisted wire and riven woodwork.

The truth was that, with the appalling mass of impedimenta it had called into being, the Frankenstein of war had succeeded in building a monster which—save in rare moments of climatic lenity—only served to impede conflict's persistent prosecution. Where the European "cockpits" were concerned, it was maintained, war, on the "factory" lines it had developed for itself, was sixty per cent impracticable.

* * *

If, then, meteorological conditions, taken in conjunction with the vast increase in *matériel,* played so important a part in the struggle which terminated twenty years ago, how much greater must be their influence in these days when war has, so to speak, put on so much more weight, has degenerated more than ever into a mere "factory" product, finds itself bowed down to an ever greater degree under the dead weight of its own vast, complicated and cumbersome machinery?

Offensive operations which might well have been essayed and carried through to a successful conclusion by a force made up of such simple and relatively un-gear-laden elements as took the field, say, at Waterloo—fought under climatic conditions to appall the stoutest-hearted—can no longer even be attempted. In these days when, apart from all other considerations, the cost of war alone renders the achievement of an early victory of the primest importance, military leaders find themselves in command of a force so huge and unwieldy, and so hampered by the burden of impedimenta by which it is accompanied, that even under the most favorable weather conditions anything in the nature of a successful *Blitzkrieg* is almost out of the question in the face of anything but the most inadequate defence.

Thus the conclusion emerges that the more "gadgets" that are invented to help war along to a quick decision, the more slowly, in practice, will that "quick decision" be achieved. Whereafter, given the incidence of a protracted unfavorable climatic spell to bog those "gadgets" into immobility, and the deadlock of stagnation inevitably supervenes, with all its deadly sapping of *moràle,* its intolerable boredom, its niggling, persistent drain on the numbers and general health of the troops employed, and its appalling cost, in the theatre of war and on the home front, imposed by its impotence and fretful inanition upon all the resources of the State, both spiritual and material.

Yet, since the demand to "simplify" war and the machinery of war would doubtless meet with the same unenthusiastic response as the plea for total disarmament, that is the situation with which all large-scale European belligerents are almost certain, sooner or later, to find themselves confronted.

It is a situation which constitutes a problem for which no general staff, however prescient its meteorological prognostications, could supply a completely satisfactory answer. But a wise and soundly conjectured anticipation of probable weather conditions would at least spare the force employed the steady wearing away of its numbers and vitality which operations pursued during an unsuitable climatic period inevitably imply.

* * *

One general staff whose close attention to the meteorological potentialities of their probable theatre of war was very scurvily requited, was the Polish. Realising the lack of modern *matériel,* of motorised and mechanised formations, and of large reserves of ammunition—to say nothing of an adequate air force—at their disposal, as they were fully aware of Germany's possession of a generous supply of these modern aids to victory, their defensive plans were entirely framed upon the assumption—the perfectly reasonable assumption—that weather conditions would operate to retard the swift rush of aeroplane-accompanied tanks, backed up by motorised infantry and artillery, and that therefore no question of a swift, overwhelming onslaught would arise. Everything was planned in the belief that the once compact assaulting columns, by the very inimicality of the terrain they would have to traverse, would be so broken up and strewn higgledy-piggledy up and down the countryside, that they could be "mopped-up" in detail by raiding cavalry, supported by marching infantry and horse-drawn guns.

In the event, and against all precedent and anticipation, the vital September period stayed obstinately and relentlessly fine, throwing the carefully-calculated Polish scheme of defence completely out of gear. Overrun, the mechanism of their supply service completely disrupted, their system of communications destroyed or in a state of hopeless confusion, irredeemably out of touch with their nerve-centre of control, their disintegration was as swift as, in other meteorological circumstances, it would have been most highly improbable. Given that the German Army was ahead of them in mobilisation, better equipped on the ground and stronger in the air; bearing in mind the fact that the necessity to maintain the front defending the industrial area of Cracow-Korlice as well as the Poznan Province, occasioned a dangerous diffusion of strength and materially militated against their assumption of the naturally strong strategical position formed by the river triangle, in which the Vistula plays so important a part; in no wise discounting the effect of the stab in the back which preoccupation with the Russian advance from the East embodied—allowing for all this, the decisive factor involving the early collapse of their gallant but hardly-favoured army was the fact that the bad weather conditions which constituted the core of their defensive scheme failed most lamentably to eventuate until too late. To say the least of it, the profoundest bad fortune for an army command which had been among the first to try and harness profoundly studied meteorological conditions to its particular strategic and tactical problem.

That, in the event, the weather obdurately refused to "play ball" in no degree discounts the wisdom and prevision which had made it the subject of especial study.

* * *

It is realised, of course, that the science of meteorology is still very much in its infancy; the melancholy unreliability of the daily forecasts published in the newspapers supply more than sufficient proof of that. But, as with all other recondite subjects, study and application are the only means whereby our knowledge of this vagarious and elusive science can be improved; and in this the would-be military pundit cannot afford to lag behind his civilian fellow-worker.

It is not suggested that the general staff of the future shall include an official "rain maker" or a couple of witch doctors with a *penchant* for meteorological prognostication. But that a proper "appreciation" of probable weather conditions should play a fundamental part in the planning of all military enterprises; that an analysis—reproduced in the form of an easily comprehensible graph—of seasonal climatic trends should form part of the "Intelligence" upon which the operations department bases its decisions, is a recommendation that mass-machinery, "factory" warfare cannot possibly afford to ignore.

Modern battles are fought as much—and more—by the instruments of war as by the men who handle them; and war's machinery—which must be taken to include all mechanically-propelled vehicles—is considerably more sensitive to meteorological conditions than the individuals who serve it.

Militant man has built up a colossal apparatus of destruction, but in so doing he has inhibited his power to employ by omitting to reckon with Nature's power of interference in his activities.

Generals *Janvrier* and *Fevrier* are more than ever potent in the field, ably supported by their equally inimical subordinates, Colonels *Mars, Avril, Octobre, Novembre* and *Decembre.* If their malign influence is to experience successful counteraction, it can only be as the outcome of a thorough and scientific study of their offensive—their *very* offensive—methods.

* * * *

Modern Citations*

General of Cavalry Hoepner

General of Cavalry Hoepner was born on September 14, 1886, in Frankfurt on Oder. He entered the army in 1905 as a cadet in Dragoon Regiment No. 13. From 1913 to 1914 he attended the General Staff Academy as a student. During the World War he served as a first lieutenant and aide in a corps headquarters. In the last phases of the war he commanded a company and was attached for a limited period to the General Staff. In 1935, the then Colonel Hoepner became Chief of Staff of Army Group No. 1. In 1936 he was promoted to Major General, in 1938 to Lieutenant General, and in 1939 to General of Cavalry.

General of Cavalry Hoepner received in October 1939 the Knight Cross decorations of the Iron Cross for unusually merited service in the Polish campaign. General Hoepner commanded in this campaign a "Panzer" corps of two "Panzer" divisions. This corps was initially employed in the center of General von Reichenau's Tenth Army, operating out of Upper Silesia. He advanced with his corps at a very rapid tempo across the Warthe and Pelica Rivers in the direction of Warsaw. Beyond the Pelica, his corps became the left wing of Reichenau's army and reached the suburbs of Warsaw on the evening of September 8th. At this point his advanced elements were from 80 to 100 kilometers in advance of the foot elements of his army. On September 9th, his situation became extremely critical when a Polish division, in his rear attacked a Panzer division in bivouac near Petrikan. There was even a strong possibility that this division would be totally destroyed. The crisis was eventually overcome and the threatening disaster turned into a decisive victory, 3,000 Polish prisoners and several batteries of artillery being captured.

General of Infantry Hoth

General of Infantry Hoth was born at New Ruffin in the Mark of Brandenburg in 1885, and entered the German Army as a cadet in Infantry regiment No. 72 in 1919. During the World War he received the House Order of Hohenzollern. In the post war army he was promoted to General of Infantry in 1938 and given command of the XIV Corps (light mechanized divisions) at Jena.

During the Polish campaign of September, 1939, General Hoth received the Knight Cross decoration of the Iron Cross for particularly able leadership of his corps and for the latter's conspicuous part in the destruction of a considerable part of the Polish Army at Radom. Hoth commanded a "Panzer" corps, operating from Upper Silesia, as a part of Reichenau's Tenth Army. This corps was the extreme southern flank element of the Army. Its mission was to cover the south flank of the army against strong Polish forces suspected of being concentrated in the neighborhood of Cracow. During the campaign, however, quite often situations developed, which demanded a very different course of action from his corps.

The Poles began a rapid withdrawal before General Reichenau's frontal attack, and seemed on the point of making good their retreat across the Vistula. General Hoth, whose corps was situated south of Kielce, now made an important decision on his own responsibility. Without regards to the danger on his east and southeast flank, Hoth pushed forward his corps along the west bank of the Vistula, outflanked to the east, the Lysa Gora Hills, where the Poles had established a defense line, and reached the rear of the Polish forces. Here his tank divisions stood on September 9th with their backs to the Vistula, facing the Poles, who were seeking to cut their way back to safety beyond the Vistula.

In the following battle to the south of Radom, which ended with the capture of 60,000 Poles and vast booty by Reichenau's army, Hoth and his corps played a leading rôle and carried out an air reconnaissance in a Storch airplane over the surrounded Poles. In the battle of Radom, Hoth's corps captured many more prisoners than his own strength.

General of Tank Troops Guderian

General of Tank Troops Guderian was born on June 17, 1888, in Aulm in West Prussia. In 1907 he entered the German Army as a cadet in Rifle Battalion No. 10. In 1914, he passed his examinations to the Kriegsakadamie. During the World War he saw service both in command and general staff positions. In the post-war army, he was promoted in 1936 to Major General, and in 1938 to Lieutenant General. In the latter year also he was appointed Commanding General of the Tank Troops. In 1939 Guderian became the first appointee to the position of Commanding General of the "Schnelle Truppen" (Speedy Troops), a term embracing tank units, motorized reconnaissance troops, motorcyclists and cavalry.

Guderian has often been called Germany's "Fuller." He is the most radical and forceful representative of those officers of the German Army urging a powerful tank force, and the maximum possible exploitation of this force in open warfare, through wide envelopments and deep penetrations.

General Guderian received the Knight Cross decoration of the Iron Cross for especially able leadership of a Panzer Corps in the Polish campaign of September, 1939. His corps formed a part of General von Kluge's Fourth Army, which operated out of Pomerania and struck rapidly across the Polish corridor in the direction of Bromberg. He and his corps are given credit for much of the success of this operation. In particular, the corps distinguished itself in forming a crossing of the Brahe River, and in destroying three Polish divisions and a cavalry brigade in the Tuchel heath.

In the latter stages of the Polish campaign, Guderian's corps was transferred to the East Prussian army of General Kuchles and operated from Ortelsburg, on the extreme eastern flank of this army in the direction of Brest Litovsk. In this theater his corps gained new laurels, in forcing a crossing of the Narew River, near Sambrow and in the capture of Brest Litovsk.

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*Daz. (German) October 31, November 1 and 2, 1939.

Special Activities

Commercial Truck Portage

By CAPTAIN E. BIBB, *Cavalry-Reserve*

Due to the foresightedness of the Commanding Officer, the 11th Cavalry, Presidio of Monterey, has just completed an interesting and instructive test in loading and unloading, using a commercial truck.

Anticipating the necessity of the regiment being moved a distance up to several hundred miles in a matter of a few hours in order to be of maximum value in the forthcoming joint Army-Navy maneuvers to be held on the Pacific Coast, a means of accomplishment had to be found.

The problem consisted of finding the most suitable means of moving the regiment any place within the area Half Moon Bay to San Luis Obispo which is to be defended by the combined forces of the 30th Infantry, 11th Cavalry, 2nd Bn., 76th Field Artillery under command of General Henry T. Burgin against a forced landing by the 3d Division in Army transports under command of General Walter C. Sweeney and assisted by the Navy. In solving the problem there were two available means to be considered, rail transportation or truck portage. Since train loading is a matter of routine training with all cavalry regiments and cost figures and schedules, etc., were obtainable at the Quartermaster's office, it was desirable to investigate and experiment with truck portage in order to compare such factors as points of loading and unloading, elapsed time, advance notice necessary, cost to the government, and number of trucks or cars necessary, etc.

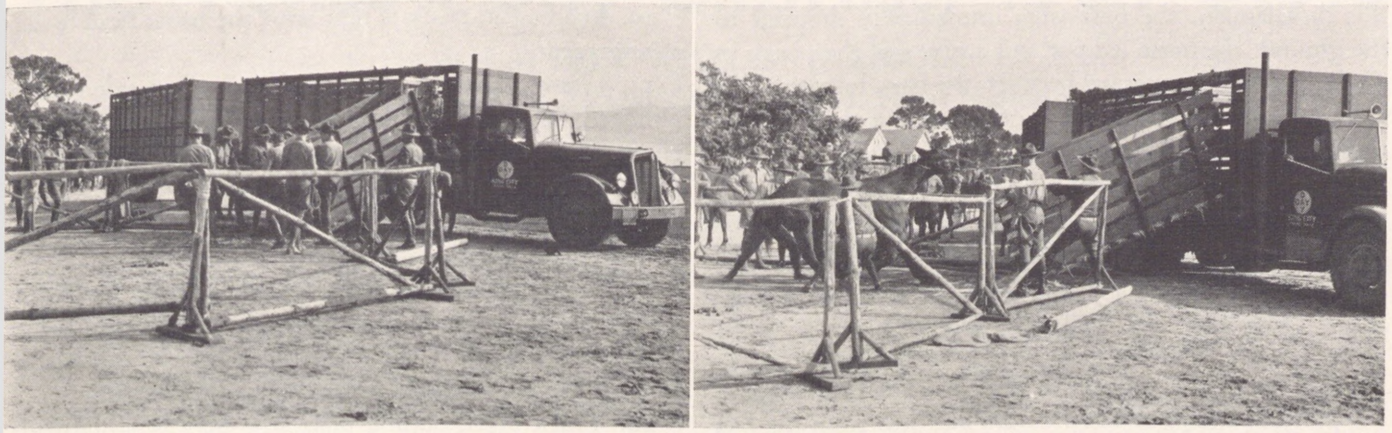
To determine the facts, a number of commercial stock transporting firms were contacted from which it was possible to secure, costs, number of trucks or trailers that could be secured, running time between various points, amount of advance notice necessary. Then the important answer to secure pertained to the feasibility and time required for loading the trucks. For this purpose a Kenworth Diesel Stock truck -12 and trailer -14 were rented for a day and all units of the organization participated in the practice loading. Troop commanders were allowed to use their initiative in loading their troops in order to bring out as many suggestions as possible— the only restriction being that "run-of-the-mill" mounts were to be used instead of special selected mounts.

Following is a brief description of the results. The truck and trailer arrived from King City, California, and loading started shortly after 9 AM and by 3 PM all units had loaded and unloaded at least one platoon of their troop. The only chute used was a dismountable, wooden one, eight feet long with rather light sides, which the trucker provided, having used it for loading cattle. Because of the height of the truck and shortness of the chute, the incline was quite steep and although well-cleated with 2 x 4's, it was quite unsatisfactory. Another disadvantage was the fact that the chute was in the shape of a narrow rectangle approximately 8′ x 3′, instead of one of fan or bell-shaped design. Perhaps the most serious handicap was caused by the fact that both the truck body and trailer body were designed for cattle and as such had a solid angle iron beam across the top of each opening, which was part of the truck sides. It was not high enough for a horse to go under without having his head and neck lowered. However, it was well-padded with grain sacks and, although many mounts were hit on the poll, none received injuries. Needless to say though, it added to their excitement. A method of having this piece movable to be taken off at loading and unloading was worked out with the owner should his trucks be hired.

Each troop rode from stables to the parade ground, where they dismounted, unsaddled, unbridled, and were in formation with each trooper leading.

"A" Troop being first in line, made the initial trial. After padding the edges of the chute with grain sacks tied on with shelter half ropes, they attempted to lead up in column of troopers. This proved almost futile as the troop was able to load only 14 horses in 46 minutes (10 in truck and 4 in trailer). Unloading was not quite as difficult being accomplished in 15 minutes, but the lack of organization was very noticeable in both loading and unloading. This is partially explained by the fact that there were no sergeants present to assist the junior officer.

"B" Troop made the next trial and, profiting by the previous troop's experience, the troop commander placed straw on the bottom of the chute, placed several nearby jump wings against the end of the chute. Then keeping the unit back to prevent crowding and exciting, he had the men lead up straight toward the chute, with just enough interval to encourage the animals to follow each other and to avoid any waste of time. This better organized effort did not give a corresponding improved result, as a number of balky animals (mostly remounts) had to be "helped" in. The help consisted of a ¾″ rope being placed through the halter and around the animal's neck,



Left—Commercial Diesel engined truck and trailer; capacity 14-11, total 25 mounts. Right—Note pulley rope and tail rope

while the other end was passed through the opening, over to the other side of the truck where 6 or 8 men were able to engage in a "tug-of-war with a horse." With this encouragement and the urging from behind in the form of a twisted, shelter half which 2 men used as a breeching to pull the hind quarters forward, a number of very stubborn mounts were forcefully loaded. This, of course, took time, but "B" Troop was able to load 19 horses (7 in truck and 12 in trailer) in 48 minutes. Then in order to test the actual hauling, the load was driven around the parade ground several times. To experiment with a different type of unloading and loading, the truck was stopped alongside a convenient stone wall and bank which was the approximate height of truck floor. Still using the chute which was approximately level, "B" Troop was able to unload in eight minutes.

The Troop Commander, Headquarters and Service Troop, whose command was next in order, decided to load as well as unload from the wall and bank. In this manner, 12 horses were loaded on the trailer in 25 minutes and unloaded in 4 minutes. It was interesting to note the manner in which the stable sergeant was able to coax a number of reticent mounts through the chute with a handful of oats although it is quite possible that about that time he was probably wishing he had them up in the troop corral where he might use his own methods of discipline. However, when Headquarters and Service Troop started to load the truck, they ran into difficulty with balky horses and spent 20 minutes in loading 5 horses and 5 minutes to unload them.

The Machine Gun Troop Commanding Officer, having observed that a good part of the trouble lay in getting the animals into the chute, decided to try a preliminary method and also elected to load from the ground. He therefore had the truck and trailer moved out onto the parade ground and the chute placed flat, some distance away. Approximately 12 minutes were used in leading horses through the chute in this position and by comparison little difficulty was encountered. This proved to be time well-spent and also determined a definite method to be used in future training. By this experiment, Machine Gun Troop was able to load, from the ground, 13 horses into the trailer in 16 minutes and 11 horses into the truck in 10 minutes. Unloading both took but 11 minutes. It should be noted here that although the capacity of the truck is 12 horses and the trailer 14 horses, the Machine Gun Troop was able to load only 11 and 13 respectively, which is explained by the difference in weight or size, part of the animals being pack animals. There is also the point which was mentioned, viz.: having more pack animals than the other troops gave them an advantage.

"E" Troop and "F" Troop followed in the order named and using much the same method, as well as what other points they had observed, secured comparatively the same results. "E" Troop spent 8 minutes in leading through the chute while lying flat on the ground and were then able to load 12 horses in the trailer in 12 minutes and unload them in 4 minutes, quickly move the chute to the truck and load 10 horses in 9 minutes and unload them in 3 minutes.

"F" Troop, the last troop to practice, had very little difficulty and started off by leading all horses through the chute twice while on the ground, taking only 8 minutes. They then loaded 14 horses into the trailer in 11 minutes, unloaded in 4 minutes, quickly moved the chute, placed 12 mounts in the truck in 8 minutes, taking but 3 minutes to unload. This troop resorted to a method which proved valuable and that was the unique use of two octangular bars from a standard jump. By tying the end of each bar to the chute entrance with rope allowing just enough slack so that the outer ends could be moved, two troopers then held the other ends, standing about 12′-14′ apart. As a horse was led between them, they moved the outer ends toward the center where they exchanged bars and in this way caused the bars to act in a pincher manner. Thus the horse was kept in a straight alignment with the chute, had a tendency to keep him moving forward away from the two bars and into the chute. It also so restricted his hind quarters that any attempted kicking was ineffective and not dangerous; in addition, the bars were held high enough to prevent the horse from jumping over them. Only in a few cases where the animal was able to rear up was one able to get over the bars. When this did happen, the bars were immediately dropped to the ground, the horse led out and away, and then back in again. As each trooper led between the bars, he turned his halter shank over to the stable sergeant and then ducked under the bars and out of the way. As little noise and confusion as possible were obtained by keeping all animals and personnel back away from the truck except a few selected men to do the loading. The stable sergeant led in and supervised the placing and typing of the animals in the truck while the First Sergeants took charge of the ground crew. Obviously F Troop's success can be accounted for by the reason that they had the experience of the previous troops to benefit from and also from the fact that being the show troop of the regiment, they had made a number of trips this past year which required loading into freight cars.

Of the troops which first led through the chute before loading, there was a conspicuous improvement over those which did not use the chute, for few animals had to be forced in by the previously described methods. As a result, all troops have or are planning on improvising chutes to be placed in their corrals where all the animals of each troop will become accustomed to them and where they may be led through at least once each day. This will undoubtedly make loading in the future a great deal easier.

Points brought out by the loading test are enumerated below:

1. All possible practice in leading through chutes should be acquired beforehand.
2. Chutes should be as wide as possible at entrance of truck and flared out somewhat at the other end on the ground.
3. Trucks should have any overhead obstruction which necessitates leading under, removed.
4. Covering floor of chute with straw or earth is helpful.
5. Loading should be accomplished by a small, selected and trained crew from each troop, eliminating as much noise and confusion as possible.
6. Use of blindfolds is useless and a hinderance.
7. Employment of two poles at end of chute as described above has many advantages, and should be used.
8. That all animals can be loaded and for speed in handling stubborn or frightened ones, a rope passed from a small crew on the other side, across the truck floor, and beside the chute should be ready whenever needed. Also an improvised breeches pulley should be at hand.
9. All men working with ropes must be made to wear gloves to prevent rope burns.
10. Loading in truck is best with the usual head-to-tail arrangement.
11. Horses should be so loaded that when side gate is removed for unloading one horse is headed toward the chute. This may be acomplished by a little inspection and study on the part of the officer in charge.
12. Allowance must be made for number of pack animals to be loaded.
13. Tying up close is necessary and may be facilitated by assigning a man, with previously collected halter shanks, to each side of the truck where prior to and during loading they tie shanks at properly spaced intervals.
14. Truck high, natural platforms may be improvised from use of banks and walls.

Comparison of the two seems to weigh in favor of truck portage for this problem. It should be remembered that the Cavalry School at Fort Riley has conducted tests and designed trucks and trailers for just such a purpose. However, this test again brought out the fact that in the absences of specially adopted trucks, regular commercial trucks may be hired or in case of emergency and combat, commandeered and used for the purpose. Briefly, the points of comparison are as follows:

1. Rail transportation requires a march to the nearest railhead and a subsequent march from a railhead to the theater of operations; while with truck portage troops and mounts may be picked up at their station or along a road in the theater of operations and moved to the new location, without any marching. Hence factors such as speed and time, fatigue of animals and men, favor trucks.
2. Rates for both commercial trucks and trains are regulated by the Interstate Commerce Commission so cost to the government is practically the same.
3. Advance notice necessary for rail transportation was considerably in excess of that required for trucks, in some cases being as high as 40 hours; while with commercial trucks a matter of 2 or 3 hours was all that was required.
4. Larger units may be moved by rail and men moved on the same train, while in a truck portage additional trucks would be required to transport troopers and equipment.
5. Mechanical failures favor rail transportation but with modern trucks and use of the convoy system this has proved to be a negligible factor.
6. In case of combat, rail transportation would be more vulnerable to air bombings and artillery fire than truck portage which, by changing its route, detouring, avoiding impassable places, etc., would have a better chance of reaching its objective.

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The Texas Pony Express, 1939 Style

By CAPTAIN WILLIAM L. RIDDLE
and FIRST SERGEANT EVERETT E. FLOYD, *Texas National Guard*

These notes concern only so much of the Pony Express, which was conducted by the Bastrop County Livestock and Poultry Improvement Association of Bastrop County, Texas, as we observed, and as was told to us by others at the time.

The idea originated at Bastrop, Texas, which is in the cattle country, and was intended to revive the famous Pioneer Texas Pony Express days of old, and of course, to advertise the Bastrop County Fair, which was scheduled to open September 16, 1939. The ride was planned and the riding time estimated in such a manner that the riders would finish on the morning the Fair opened; however, this was not the case, as the leading horse finished ahead of the estimated time.

The entry list was to be limited to one hundred riders and the entry fee $5.00. The prize money was to be collected from merchants along the route of the ride. The prizes were as follows: 1st Place, $500.00; 2d, $150.00; 3d, $75.00; 4th, $50.00; and 5th, $25.00.

Rules and regulations governing the ride were as follows:

Each rider was allowed only one horse and was required to travel the entire official designated route without change of horse, equipment, or rider.

Each rider was responsible for his own supplies, feed, and equipment.

The rider was allowed to ride or lead when he chose. There were no designated hours to ride after the ride started and each rider could ride or rest when he desired.

The rider was allowed to have his horse cared for by others during his rest periods.

Each horse was required to carry a minimum weight of 180 pounds, including saddle and blanket.

Each rider was required to travel at all times within boundaries of highways and streets designated as the official route by the association.

A sufficient number of judges was furnished by the association to check all riders at times deemed necessary by the association.

Any act by any rider intended to not comply fully with all rules and regulations would disqualify the horse and rider.

The decisions of the judges were final.

The association was not responsible for any injury or damage to any horse or rider before, during, or after the contest.

Judges were empowered to withdraw any horse during the contest if the condition of the horse was such that, in the opinion of the judges, it was necessary to prevent injury to such horse or horses.

The official route was designated as follows: Bastrop-Elgin-Manor-Austin-San Marcos-San Antonio-Seguin-Luling-Waelder-Flatonia-Schulenburg-LaGrange-Smithville-Bastrop. *A total distance of 278 miles all over main highways and through towns.*

With the exception of ourselves and one other, all riders used stock saddles and all sorts of blankets, ranging from stock-saddle pads to heavy quilted blankets. Almost all of these used the cowboy curb bit. We used officers' field saddles, saddle pads, and snaffle bits.

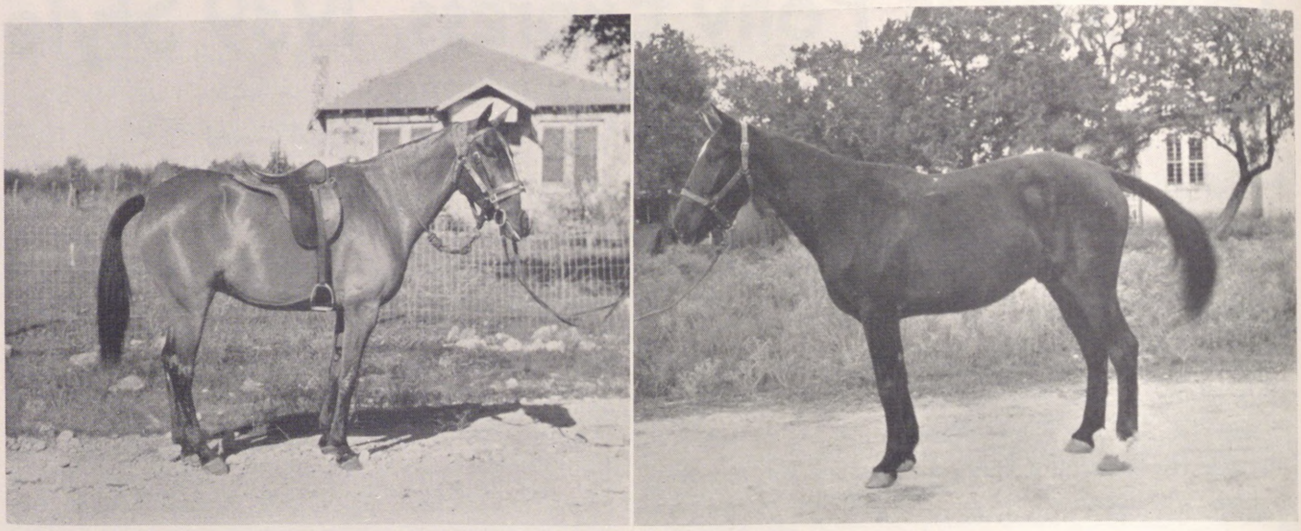
Because of the weight requirements, it was necessary for Sergeant Floyd to weight his saddle with twelve pounds of sheet lead. This was distributed over the saddle by using three pounds in each stirrup, covered with leather, and six pounds shaped around the cantle and secured in such a way that it could not move. This was done at the beginning of the conditioning period.

We used a small one-half ton truck which escorted us at all times and in which we carried forage (crushed oats), feed pans, four 10-gallon milk cans of water, water buckets, cots, bed rolls, drinking water, and two men who cared for the horses, etc. Almost all of the riders had caretakers and trucks, a great many of them had horse trailers, so that after a few hours from the starting point the road was cluttered up with all sorts of vehicles. It looked like a gypsy caravan on the move. One rider attempted to travel without any equipment, forage, or help. He left the starting point on a little black mare, about 14 hands, with a big stock saddle, two bottles of liniment, a raincoat, a heavy quilt, and pack on his back. We passed him about four miles after the start, gathering up his equipment from the road where the mare had thrown the rider and his equipment.

We entered two horses on August 19, 1939, and began conditioning them for the ride. This allowed only twenty-three days to get them in condition and most of our riding had to be done early in the morning and late in the afternoon and night, as we both had other work to do. We worked them over roads in the vicinity of Camp Mabry which afforded varied terrain and roads. During the period of conditioning, the horses were ridden from ten to twenty-five miles per day and their feed gradually increased until they were being fed four times daily about twelve pounds of oats. Both horses are big (16-1) and it is estimated that they lost approximately forty pounds each during this period.

During the ride we fed crushed oats, about three pounds at each feeding, and a very little hay at night. The other riders, those we observed and others with whom we talked later, would ride into a halt, remove the bridle, water, feed the horse oats for about five minutes, mount and ride on.

Both horses were shod at the beginning of the conditioning period with No. 1 shoes and shod again four days before the ride with borium treated shoes. We used No. 1 shoes treated with 1½ ounces



"Pato" and "Doc" of the Texas Pony Express

of Acetylene Tube Borium 8-10 screen size with fifty per cent of this amount on the toe and the balance distributed between the heels. One pound of borium was used to treat twelve shoes. The feet were packed with tar-oakum and a leather pad used under the shoes. These treated shoes have traveled a record distance of 250 miles and show very little wear. Considering the fact that most of our riding had been over pavement and hard surfaced roads, it is believed that these treated shoes will last for a long time under any conditions of use.

In checking over some of the other horses the day before the ride, we found them shod with slick shoes, heel caulks, toe caulks, and some of them with both. One rider had composition boots for his horse which he planned to use on pavement and hard-surfaced roads, but stated later that he was unable to use them because it was raining and the pavement was wet and slippery every time he needed them. Our treated shoes proved their worth on wet pavement, and we had a lot of it, as they positively did not slip. Another rider stated that his shoes were worn out on reaching Seguin (about 160 miles) necessitating reshoeing all-around.

All sorts of gaits were used, including walking, trotting, canter (lope), running-walk, pacing, and the much used cowboy jog. Most of the riders came from ranches around Central Texas and were riding horses which were accustomed to the lope and jog, and could maintain these gaits for long hours at a time. Some of the horses were never seen walking, but would jog along for a while and then lope. They were given very little rest, some of them never over two hours at any one time, and several riders were seen sleeping in the saddle as their horses jogged on down the road. We used the walk and trot and led at least five minutes each hour. We had planned to use a 3 minute walk—7 trot schedule, and did whenever the terrain would permit. We had the two fastest horses in the ride and certainly rested more than any of the others.

The contestants were required to be at the starting point at 7:00 AM, Monday, September 11, to weigh in, draw for place, etc. It was decided to start them in groups of ten at five-minute intervals and numbers were drawn by each contestant to determine his group. We both drew the fourth group and left the starting point at 8:30 AM with 30 horses ahead of us. Most of the riders left the starting point at a canter (lope). The first seven miles of the course was over a new road which had not yet been opened to wheeled traffic, of which about five miles was deep sand. This was tiring to the horses as they were blowing harder at the end of the first hour than at any time during the ride. About an hour and a half after the start it began to rain and rained until noon. We arrived at Manor at 1:20 PM (31 miles) after stopping at Elgin for twenty minutes where we registered and had coffee. On reaching Manor we had passed twenty-two of the thirty horses which left ahead of us. We halted there, groomed, watered, fed, and had a bite of lunch. We left Manor at 3:00 PM and rode to Austin, arriving in the east part of the city just before 5:00 PM when it again began to rain. We were routed through the main part of town just as the 5 o'clock traffic rush was on, through a heavy rain, and the going was heavy. We halted again about 7:00 o'clock seven miles north of Buda, and watered, groomed, and fed the horses and had supper. After a halt of about two hours we rode on, halting for the night just outside of San Marcos at 1:15 AM, after having ridden seventy-two miles that day, much of it in the rain. Camping sites along the highway were hard to find and as we were required to remain within the boundaries of the highway at all times, we had to resort to all sorts of tricks—so we drove the truck off the highway and tied one end of the picket line to the truck and the other end to a fence post.

Toward the end of the first day both horses had slowed their pace considerably and the going was heavy. However, after about four hours rest they were refreshed and stepped out when we resumed the ride at about five o'clock Tuesday morning, September 12. We rode into San Marcos where we registered and had breakfast. The road shoulders between San Marcos and New Braunfels are very good but I never before realized there were as many hills along this stretch of road—they seem so different in a car. We had planned to maintain a schedule of 3 walk and 7 trot with 5 minutes lead and a 5-minute rest each hour; however, we found it necessary to lead more often because of the hills. This also calls to mind that each rider was identified by a number which was painted on white oil cloth about 4 x 6 inches in size and pinned on the saddle or rider in some manner in which it could be seen by the judges at all times. I had pinned my numbers on each side of the saddle, and during the rain and accompanying wind of the first day, the number of the near side kept blowing up under me and the oil cloth had worked off onto the saddle—leaving a small deposit thereon—so before I realized what had happened I had worn off some skin from my buttocks. This didn't seem so bad at first but as the day progressed so did the soreness and the morning of the second day found me stiff and sore. Having to do something about this, I covered the affected parts with adhesive, put on in a bent-down position, so that when I straightened up or tried to walk and lead, I looked, and felt, like an old man.

We rode into New Braunfels about 8:30 AM—in the rain—and stopped for about 2 hours while the horses were rubbed down and watered. We continued the ride at 10:30 and rode toward San Antonio, turning off the Post Road at Salado Creek and rode along the cut-off to the San Antonio-Seguin highway. We rode a short distance on this road and halted to rest at about 3:00 o'clock, watered, fed, and groomed the horses. As had happened almost every time we stopped, it began to rain so we had to put up canvas again and tried to bathe (in a wash-basin) but found that this would require an all-around defense as the traffic was too heavy for road-side bathing.

With the aid of the truck and a shelter-half pinned across the front of the fly, we managed to wash off a little of the grime. We left this halt at 6:00 o'clock and rode until about midnight when we halted for the night about ten miles short of Seguin. We had covered 78 miles this day. It is believed that this night's ride, from 6:00 PM until 12:00 PM, was a contributing factor in our withdrawal the following afternoon as we had covered about thirty-six miles, mostly pavement. The road shoulders along this stretch of road looked very inviting from the highway but were found to be very uneven with small depressions and rocks under the grass which covered most of it. We continually pulled the horses off the pavement but the going was so rough for their stride that they refused to travel over it so we pounded along, letting them have their way in the matter. The traffic along this road was very heavy and fast, so that it was necessary for our truck to trail along immediately behind us for protection; this was an aid, however, as the night was very dark.

The following morning we resumed the ride about 4:45 AM, Wednesday, September 13, and rode into Seguin for breakfast. We left Seguin after about 45 minutes, and continued on to Luling. Both horses seemed leg weary and began stumbling, so we led more frequently, but they continued to stumble. We stumbled into Luling at about 11:30 AM, and after leading through town pulled out to rest the horses and rub them down. They were tied on a short picket line while the men rubbed them down and grazed them. While this was being done, however, after grazing awhile both horses lay down and rested a short time. We rested here for about two hours and resumed the ride. It was difficult to rest, as it had been all along, because as soon as we stopped several cars and trucks stopped with us and wanted to ask questions and look at the horses. Several of the contestants who had already withdrawn also stopped and offered advice and gave us the dope on the few horses ahead of us. At this time the number of horses left in the contest was about 50 per cent, due to faulty shoeing, lameness from several causes, including bad ankles, and exhaustion. When we reached Luling there were only ten horses ahead of us and several of these were in the first two groups to leave the starting point—giving us the edge on time. We were complimented all along the route on the care we were taking of our horses and their condition.

After this rest we resumed the ride and rode to Harwood, a small place between Luling and Waelder, but our pace had slowed down considerably and both horses continued to stumble, both fore and hind, so we decided to pull out again, rub their legs and put on wraps. This is a moot question whether or not wraps at this stage of the game were advisable, however, we were delayed for about one and one-half hours at this halt when we again resumed the ride. It was found that all ankles on both horses, particularly the front ones, were swollen. Their legs had been rubbed with liniment at every halt from the beginning of the ride, even the short halts for water. After resuming the ride we rode for about two hours, leading often and making very little headway and the horses continued to stumble to such an extent that it was decided to withdraw rather than risk permanent injury to the horses—so we pulled out after having ridden 196 miles from 8:30 AM, Monday, September 11, until about 4:30 PM, Wednesday, September 13, with the horses in good condition, with the exception of their ankles.

Our only regret is that we could not finish the ride. When we entered Luling, on Wednesday at noon, there were only ten horses ahead of us and we feel certain that, had our pace held up, we could have overcome their opposition in due time. We feel that we have learned something about horses and people that love horses, and others that have no consideration for horses.

It is significant that of the 64 horses entered only 7 finished the ride.

The two horses entered were: *Pato*—Gelding, 16-1, 1,200 pounds one-half thoroughbred, 11 years. Ridden by Captain Riddle. *Doc*—Gelding, 16-1, 1,150 pounds, one-half thoroughbred, 6 years. Ridden by First Sergeant Floyd.

Effective Training Under Adverse Conditions

By MAJOR C. H. GERHARDT, *11th Cavalry*

Demonstrating quite effectively the fact that cavalry training may be carried out on almost any type of terrain, regardless of the proximity of dwellings, the 11th Cavalry in December completed a series of three training problems at the Presidio of Monterey which involved operation of troops through post and city streets before reaching their objectives. First problem, that of Squad Combat Firing (see sketch), was conducted on the Presidio November 24. Twelve squads, two from each organization, participated and the results, generally, were very satisfactory. As may be seen on the accompanying chart, the course covered slightly more than a mile—all of it an uphill pull through the heart of the Presidio to the firing points on the upper polo field.

Squads reported at the Serra Monument below the artillery stables and were given orders to move as a patrol via paved route shown and engage any enemy encountered. Radio communication was used to start each patrol as the firing points cleared, and umpires judges on issuance of orders, formations on the approach, use of cover on the leader's reconnaissance, formation of firing line, discipline, etc.

Each patrol, after it left the paved road near the hospital, encountered a small obstacle and a wire barrier; the latter being installed to embarrass patrol leaders who had forgotten wire cutters. At the riding pen leaders received new situations calling for dismounted action against an outlined enemy (area targets) 600 yards away. These were engaged and after half of the squad's ammunition had been expended the group moved under cover of the brush on the south to the 300-yard firing point. They were moved administratively at the conclusion of this

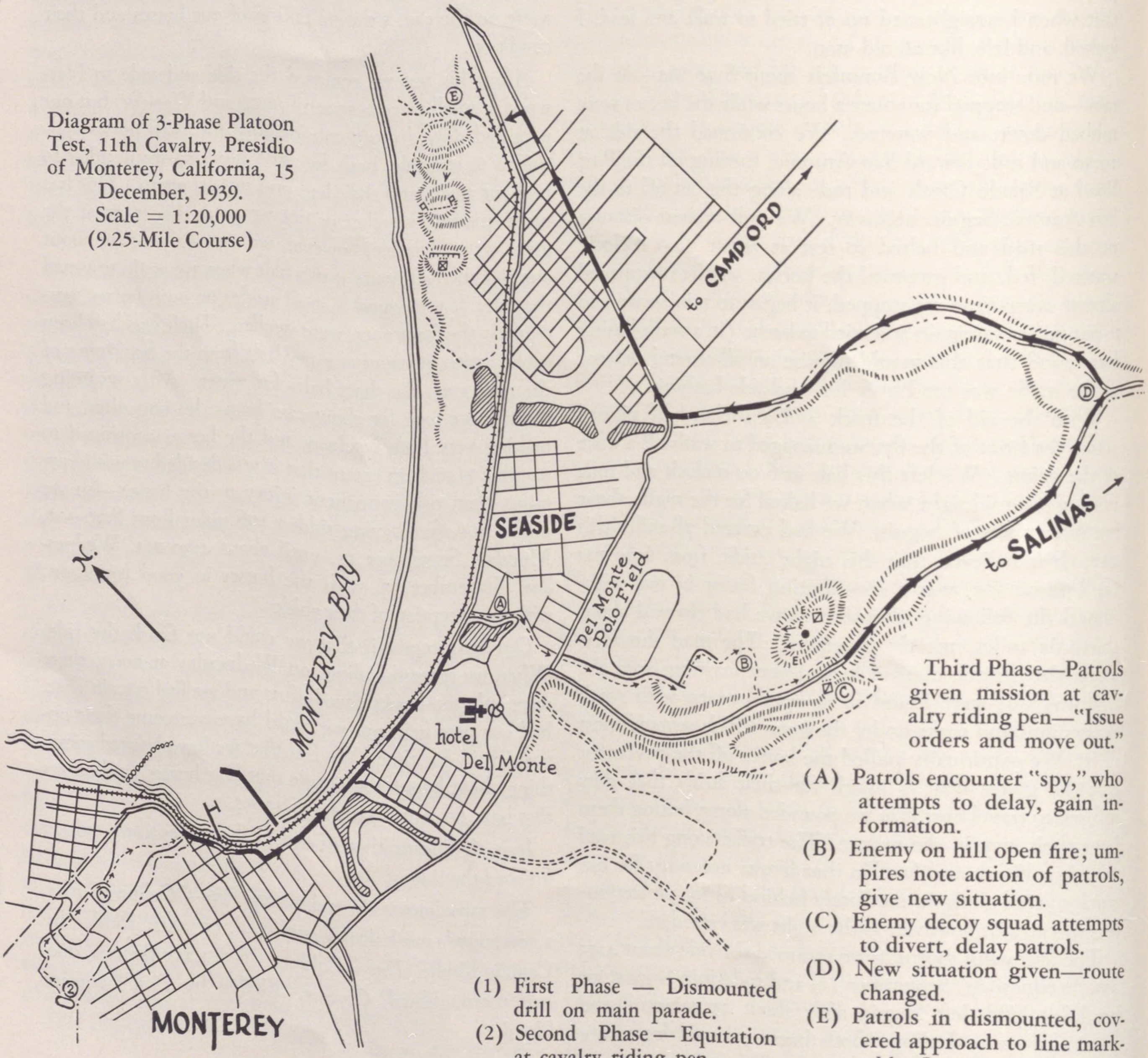
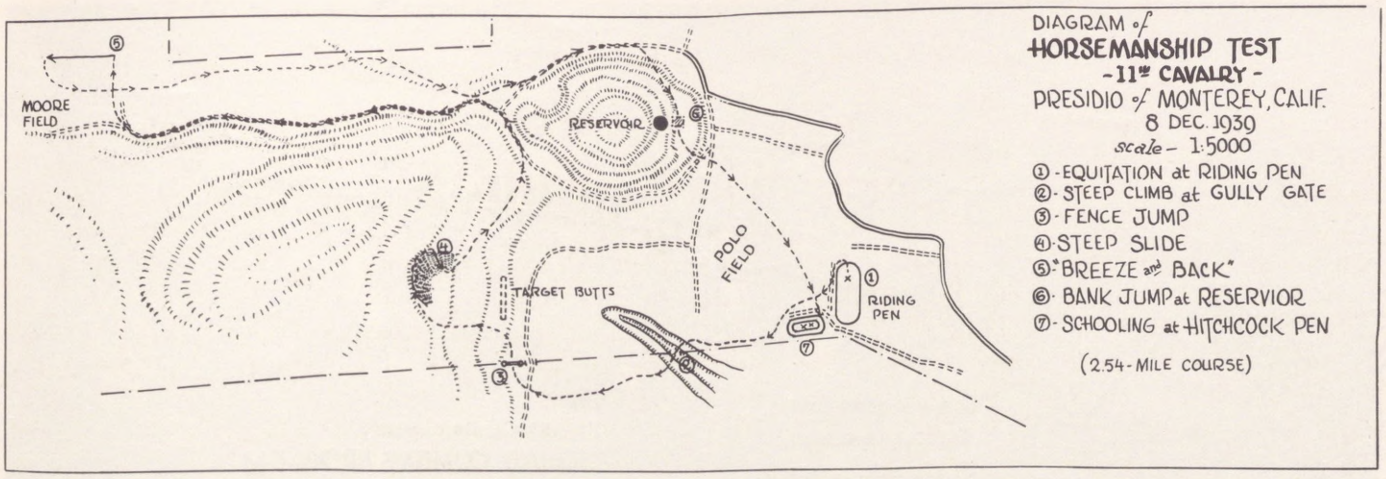


Diagram of 3-Phase Platoon Test, 11th Cavalry, Presidio of Monterey, California, 15 December, 1939.
Scale = 1:20,000
(9.25-Mile Course)

(1) First Phase — Dismounted drill on main parade.
(2) Second Phase — Equitation at cavalry riding pen.

Third Phase—Patrols given mission at cavalry riding pen—"Issue orders and move out."

(A) Patrols encounter "spy," who attempts to delay, gain information.
(B) Enemy on hill open fire; umpires note action of patrols, give new situation.
(C) Enemy decoy squad attempts to divert, delay patrols.
(D) New situation given—route changed.
(E) Patrols in dismounted, covered approach to line marked by flags.



phase to the pistol range for 30 seconds of fire at surprise targets. Gas was simulated at this point.

A study of the umpires' tabulation showed that, in the main, too much time was taken in building up the firing lines, in issuing orders, and disposing of the led horses. Troop B's rifle squad, which turned in one of the two best performances, took far too much time to complete the course (56 minutes), as against 24 minutes for the 2d Squad, Machine Gun Troop, which tied for second honors on the general score.

Hits obtained averaged 17 on 7 out of the 12 concealed rifle targets, and 9 hits on 4 of the 8 pistol targets. Troop B's rifle squad was high with 35 hits on 10 rifle targets, and 16 hits on all 8 pistol targets. For some unaccountable reason the 2d Section, Scout Cars, came to grief on the pistol range and failed to obtain a single hit—all in spite of the fact that the troop commander was present during the firing!

Second Problem — Horsemanship Test

Hilly, wooded terrain on the eastern end of the Presidio was found to be an excellent location of the horsemanship test, which was held December 8. Again, two squads participated from each troop of the regiment. Judging was on seven elements over the 2.54 mile course, the first being the equitation phase at the Cavalry Riding Pen. Both Machine Gun Troop squads and the first squad from Troop E placed high in this phase.

Squads, at convenient intervals, moved out in patrol formation to the gully at the south fence where a steep bank and narrow gate had to be negotiated. Squads from Troop F and Machine Gun Troop took top honors here. Patrols then reëntered the reservation at the Legion Park fence jump, a 3′ 6″ barrier over which only one squad came to grief. At the slide (four phase) four squads of the 12 were standouts. The course led along the north side of Presidio hill to Moore Field, where squads were tested on a 300 yard "breeze and back" straight away. Troops B, E, and F piled up points in this phase.

Patrols then returned over generally the same route to the quarry hill and negotiated a rail, ditch, and bank barrier. Route led from there directly to the Hitchcock Pen, where each squad worked their horses for eight minutes. For the entire course the three high groups were the first squads of Troops E and F, and the second squad of Troop B.

Three-Phase Platoon Test

Third problem of the series, a platoon test covering dismounted drill, equitation and a reconnaissance patrol problem over a 9.25 mile course, held an unusual amount of interest for both participants and umpires. Platoons from Troops B and F tied in the dismounted phase on Soldier Field. Groups reported mounted to the Cavalry Riding Pen for equitation work for a brief period and then letters of instructions were issued to platoon leaders giving them the mission of moving on an enemy in the vicinity of the Del Monte Polo Field reservoir. A route was assigned for the reconnaissance, which led through crowded Monterey and out Del Monte Avenue to Seaside and the Del Monte Avenue cut-off.

Platoons at this point ran afoul of a "spy," a corporal borrowed from the 76th Field Artillery who, clad in civvies and armed with a "No Trespassing" sign and a big cigar attempted to delay patrols and secure information. His method was to plant himself in front of the approaching point and start waving his arms and demand that troops keep off his property. Platoon leaders, confronted by an irate individual who vociferously claimed exclusive rights and title to a sizable chunk of public highway, and who demanded name-rank-and-shoe-size of every member of the patrol "before I start suit agin the gov'r'munt," had a neat problem on their hands; a problem, incidentally, not generally covered in regulations. Troop B's solution, that of barging straight ahead without breaking gait, met with umpire approval, although Troop F's platoon took the "spy" prisoner and searched him—an adequate solution except that the platoon was delayed a matter of ten minutes. Complaints on the part of troop commanders to the effect that the spy was not clad in fatigue clothes and consequently wasn't playing fair, met with an official cold shoulder. Enemy agents don't play fair, anyway, was the umpire consensus.

On the high ground east of the Del Monte Polo Field patrols came under fire of enemy machine guns supported by riflemen. Their action at this point was noted and their

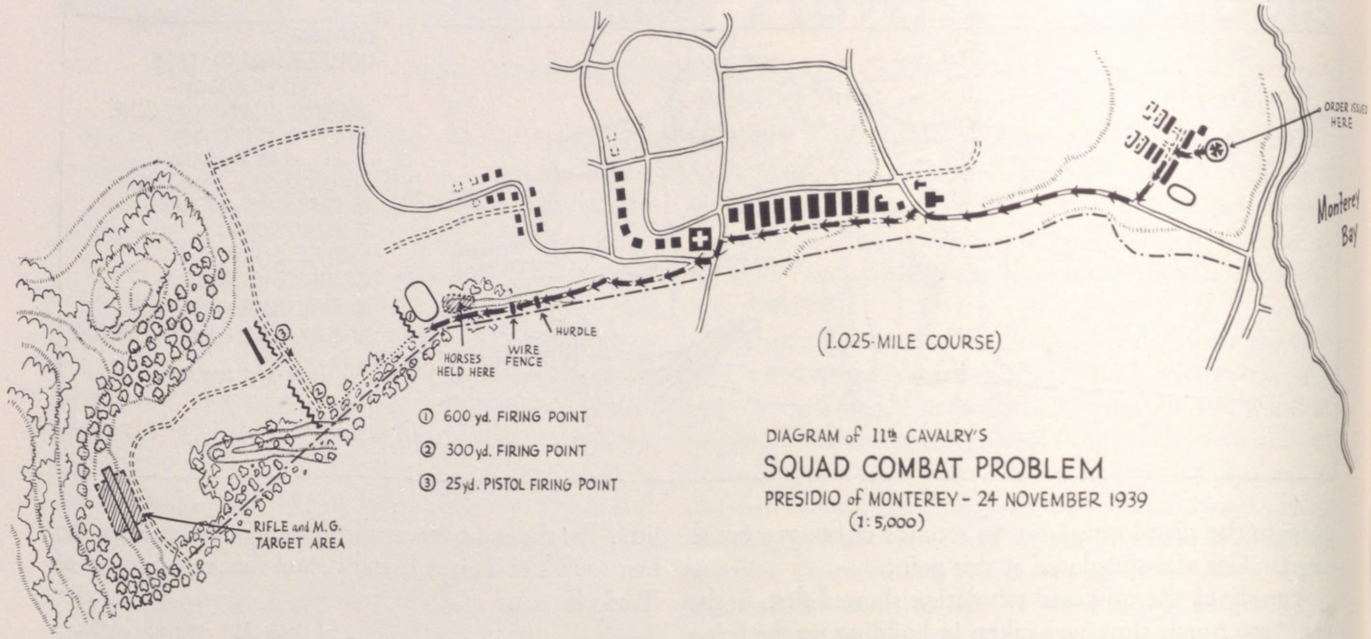


DIAGRAM of 11th CAVALRY'S
SQUAD COMBAT PROBLEM
PRESIDIO of MONTEREY - 24 NOVEMBER 1939
(1:5,000)

decisions scored. The umpire's report showed that the enemy machine gunners had estimated the damage their fire might have done to oncoming patrols. This rating gave Troop F's platoon a relatively small loss of possibly ten per cent. Troop B's patrol, on the other hand, neglected to break from column of twos and showed indecision for several seconds under the blast of fire. Gunners rated this group's losses as high as 50 per cent. New situations, requiring reconnaissance of the Salinas highway to the vicinity of Eight-Mile-Gate, were given and patrols moved via the horse gate to the highway. Here an enemy decoy of three troopers flanked through the wooded hills on the south side, succeeding in delaying three platoons for several minutes when they sent out squads in an effort to effect a capture.

At RJ 510 a new situation was given outlining an enemy in the sand dunes northwest of Seaside. En route along the the Castroville cut-off platoons came upon a wounded enemy trooper armed with a rifle but without ammunition. It was the delay angle again, the enemy soldier being well-placed in front of a steep cut in the hill. Best action was that taken by the Troop E point, which executed an immediate pistol charge, eliminated the trooper, and then extended rapidly after gaining the high ground.

At the sand dunes patrols were required to make a covered dismounted approach and build up a firing line on a flag-marked hill 300 yards from the enemy position. Failure of most platoon leaders to make a preliminary reconnaissance resulted in loss of cover; however, platoons from Headquarters Troop and Troop A, by selecting the more circuitous route via the beach, maintained perfect concealment.

Best performance in all phases went to the platoon from Troop F, with Machine Gun Troop's platoon a close second. Others finished in the order: Troop A, Headquarters & Service Troop, Troop B, and Troop E.

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The Junior Essex Troop of Cavalry

New Jersey has always been cavalry minded. The state has produced three notable cavalry officers—Phil Kearny, Judson Kilpatrick and John K. Herr. The exploits of the Monmouth Horse in the Revolution won high commendation from Washington and New Jersey Cavalry gained much renown in the Civil War, particularly the First New Jersey and Second New York (Harris Light) Cavalry, six troops of which were recruited from Sussex County, New Jersey by Lieutenant Colonel Judson Kilpatrick and six in Orange County, New York by Colonel J. Mansfield Davies, Professor of Mathematics at West Point.

For fifty years the Essex Troop, now a regiment with headquarters at Newark, has been rated one of the most efficient National Guard organizations in the country. As a single troop this unit furnished over one hundred officers in the World War. Expanded to a regiment in 1920 the authorized designation is the 102nd "Essex Troop" Cavalry, and this organization maintains all the traditions of the Cavalry and of the old Troop assisted by the Essex Troop Association of active and former members.

In 1931, Lieutenant Colonel H. C. K. Mattison, a reserve officer and former Essex Trooper, who had founded the Montclair Mounted Scouts (now the Montclair Mounted Troop) a year before evolved plans for a cadet corps to hold same relation to the 102nd Cavalry as the Knickerbocker Greys to the 107th "Old Seventh" Infantry. After some changes these plans were approved by

Junior Essex "A" Troop (less one squad on range) at Newark Armory

Colonel L. B. Ballantyne, regimental commander (now Brigadier General L. B. Ballantyne) and adopted by the Essex Troop Association. A constitution was drawn providing for a Junior Essex Troop of fifty boys, eleven to fourteen years old upon enrollment, who might be reenrolled annually until the age of eighteen, when eligible for the regiment. Administration was vested in a Parents Committee in conjunction with an Essex Troop Committee with the regimental commander as president ex-officio. Colonel Mattison was elected president and appointed commandant, both of which offices he still holds. Modest dues were fixed and regulation cavalry uniforms with laced boots adopted; also yellow tie, the authorized distinguishing mark of the Essex Troop—each boy to furnish his own uniform. Authority was secured for the use, free of course, of fifty federal horses for a weekly drill with flat saddles furnished by the Essex Troop at a nominal charge.

Fifty very desirable boys were enrolled in two weeks, mostly from Montclair and the Oranges, and drills began at the Newark Armory in October, 1931. A sergeant of the 102nd Cavalry volunteered to assist Colonel Mattison. From the first the troop was an astonishing success and the enthusiasm of the young riders has known no bounds. A joint exhibition with the Knickerbocker Greys in April, 1932 attracted 2,500 spectators and since then the greatest trouble has been to hold the membership down, although strength was increased to eighty-five boys. In 1936 Colonel Mattison was authorized to form a second unit to be known as Junior Essex Troop B at the newly enlarged armory of the 3rd Squadron, 102nd Cavalry at Westfield, eighteen miles from Newark. Last year a third Troop, C, was formed at the magnificent new armory of the 2nd Squadron and Machine Gun Troop at West Orange.

Newark was designated the headquarters of the squadron thus formed. The new troops were organized almost over night with a nucleus from the original troop and enrollment from a waiting list that has numbered up to 150 names. Each troop is limited to 65 boys with the use of 60 horses at each armory. Flat saddles have been provided by the Essex Troop for the entire squadron and drills are held simultaneously at the three armories on Saturdays. Recruits are from good American stock. No consideration whatsoever is given for wealth or social position. All must be at least four feet ten inches, must weigh over 76 pounds, and be of high scholastic standing. All are carefully investigated and any boy known as a bully, a sneak or a cheat is excluded. The applicant is given a simple riding test as it is considered unfair to many excellent riding schools in the vicinity to accept boys who have not at least had instruction in the fundamentals. Then comes a physical examination by the Medical Department, 102nd Cavalry, which is repeated yearly. Recruits are accepted in September only.

Drills are held every Saturday morning from September to June. Assembly is at 8:45, followed by inspection dismounted. Than a lively mounted drill until 11 o'clock after which is rifle practice or an occasional foot drill until 12:30. Many remain after that for fencing instruction. It is a strenuous schedule but the youngsters love it and thrive on it. There is sometimes a mid-week assembly for polo, jumping or perhaps a rifle match. Talks are often given upon care of the horse or kindred topics. Colonel

Mattison, whose father, the late Lieutenant Colonel W. R. Mattison, commanded a famous regiment of Custer's Third Division when barely twenty, often relates an enthralling tale of the old cavalry, many of which he inherited and some related to him by Mrs. George A. Custer, Major General Wesley Merritt, and Lieutenant General Hugh Scott. Although Colonel Mattison is a bachelor and with little previous contact with children, he has had remarkable influence upon the juniors. He supervises all drills and has an uncanny knowledge of every boy. He is often called upon by a parent or school principal to straighten out some little difficulty in a youngster, and usually succeeds. Discipline in the Troop has surprised all, but it is mostly self-imposed. The cadets are proud of their uniform, and are the best behaved youngsters one could wish to know. The only punishment is furnished by a system of demerits, ranging from one for inattention, to ten for smoking. Twenty-five demerits in a year cause dismissal, but only three boys have ever received this penalty. If a boy fails to show aptitude or still shows timidity at the end of the first year, his parents are quietly asked to withdraw him.

Instructors are officers and men who volunteer their services. No person connected with the troop has ever received remuneration. Present instructors are especially noteworthy—Major Dwight Hughes, Cavalry, at Newark; Captain Don Carleton, Cavalry, at West Orange; Captain Frank Doetterl and Lieutenant R. U. Scott, 102nd Cavalry, and Lieutenant Albert Olson, late 102nd Cavalry at Westfield. Major Hughes and Captain Carleton are instructors with the regiment. Assisting are several highly efficient sergeants. Rifle practice is in the hands of James Maris, Wallace Dix, and J. L. Peterson.

All ranks and ratings of a rifle troop are filled by the juniors and drills are under the youthful officers and noncoms with instructors mounted but mostly on the side lines. A drill schedule is issued weekly in advance by Captain Alvin Sauer, P. & T. Officer, 102nd Cavalry, and chairman of the Essex Troop Committee. This schedule is studied at home by the cadets with the aid of the ROTC Cavalry Manual, and drills are remarkable for their smoothness, for their spirit, and for the leadership that has been developed. The average age of the cadets is 13 years. At present only three have passed their 17th birthday. Many boys leave for prep school at the age of 15 or 16, while others prepare at local schools in order to remain with the troop. It is the ambition of every live boy in the community to become a member.

Some 300 cadets have received honorable discharges from the Troop after one to seven enrollments. When organized it was not considered that all members would enter college, but such has been the case. Only four have finished their education, two of whom have entered the 102nd Cavalry, another winning a Cavalry reserve commission at CMTC, the other becoming an aviator. Two ex-members are at the U.S.M.A., another a first classman at V. M. I., expects an Army career. Over 60 are in ROTC units at Princeton, Yale, Harvard, Cornell, M.I.T., and other institutions. Many plan to enter the 102nd Cavalry upon graduation.

JUNIOR
ESSEX
TROOP

"B" Troop resting after a strenuous drill. Even the sergeant takes his ease

Among the cadets now are the sons of a number of Army and National Guard officers; also Ryman Herr, Jr., 13 year old nephew of General Herr, who travels 100 miles every Saturday to and from drill.

At the start of the Troop many said that young boys should not be subjected to the evil influence of an armory. This objection soon subsided, and the fine conduct of the personnel of the regiment has won universal praise. Others said that youngsters of 11 or 12 years could not handle spirited cavalry mounts. The fact is the cadets soon ride like veteran troopers. A very light hand has been developed and fear is almost unknown. Riders mount different horses at every drill, but such care has been used in fitting rider to horse in 80,000 boy hours in the saddle since 1931 not an accident has ever occurred.

When the entire organization is concentrated at the Newark armory for a review, perhaps twice a year, it is a thrilling sight to see the squadron pass in column of platoons, first at a walk, then at a trot, and finally at a gallop, all to the music of the fine mounted band of the 102nd Cavalry. Entries from the Troop are made in all local horse shows, and usually in the National. Countless trophies have been won.

Some polo is being played and this sport is now to be much more developed.

Rifle practice has also been very successful. During the past year every cadet qualified as marksman or better, and the rifle team won the Class C Trophy of the N. R. A. (Boys under 15). In two years the team has met but two defeats, once by the 102nd Cavalry team and once by a high school team whose ages were 18 and 19.

The Junior Essex Troop has been highly commended by such authorities as Colonels George M. Russell, John K. Brown, Frederick Herr, and Lieutenant Colonels Charles Lyman, Harold Rayner and Frederick Boye. Great credit has been given to Lieutenant Colonel Mattison for inaugurating the junior cavalry movement, which has resulted not only in the Junior Essex Troop but in the Montclair Mounted Troop, a successful private organization of both boys and girls. The popularity of both these units has made riding an outstanding sport among the young of Northern New Jersey. In Essex, Morris, and Union Counties it is estimated there are some 3,500 boy and girl riders. A national authority has stated there is more riding of the proper type among the young in this section than in any similar section of America.

Much praise is bestowed upon Brigadier General Ballantyne, Colonel Henry L. Moeller, present commander of the 102nd "Essex Troop" Cavalry, and the entire membership thereof in sponsoring the Junior Essex Troop. This is now looked upon as a remarkable achievement and of great foresight in developing character and horsemanship among the youth of the community.

An eleven year old recruit recently fell from his horse and landed face down. Colonel Mattison picked him up, hurriedly dusted him off and boosted him into the saddle before he should have a chance to become scared. Then the youngster straightened up, saluted, and spoke: "Sir! May I spit out the tanbark?"

☆ ☆ ☆ ☆

The Instructor*

1. *General:*

Only he who attempts to teach a subject ever realizes how little he knows about it. One can learn more about any given subject in attempting to teach it than by any other available means. The use of Reserve Officers therefore, will be encouraged. It is realized that some of the officers selected as instructors have had but little experience as teachers; for their benefit, the following is furnished:

In instruction of any nature, educational psychology is one of the prime considerations of the instructor. In fact, the art of instructing *is* applied psychology. The workings of the normal human mind—the mental processes and mental reactions—necessitate a harmony so as to place in a most favorable manner in the student's mind, the desires of the instructor.

Interest and attention are closely related. Interest is a by-product of attention, and not its cause. It has inherent peculiarities. It is contagious. If a topic manifestly interests the instructor, it is bound to interest his audience. Enthusiasm begets enthusiasm. It is the very essence of good instruction.

Previous knowledge and education however, are most important factors, particularly in Group School instruction. Instructional material for use by Reserve Officers designated as instructors for Troop and Group School Conferences will be provided. *By careful preparation prior to the Conference the instructor becomes confident,* and the student, regardless of whether or not he is junior or senior to the instructor, immediately recognizes that the instructor has something to offer which will benefit the student professionally. The student therefore is receptive; he will listen and give his attention. To hold his interest and give him a very definite and concrete idea of what it is all about, and not leave him dazed and confused, the instructor must employ the *technique of presentation.*

From the viewpoint of the instructor, therefore, his Conference obviously assumes two phases: namely, Preparation for the Conference, and Presentation of the Conference.

2. *Preparation for the Conference.*

Assume that *you* have been designated to conduct a Conference. To do so, with credit to yourself and with benefit to the Class, you must *master your subject* completely *before the Class meets.* When you have attained this mastery, you are an expert on the subject treated, and one of the main ends for holding Troop and Group School sessions has been served.

The first step toward the attainment of mastery of any one of the subjects to be considered, is a careful study of the text and the principles involved therein. Remember that there are an infinite number of conceivable solutions to all problems, good, bad, and indifferent, and that it is your mission to decide which one is deemed best. It is a good plan to work out *your solution* of the requirements (or the answers to the questions) *without referring to the solution furnished;* then study thoroughly the furnished solution and discussion and note wherein your solution and reasons differ. Now, try to imagine (write it down) the solutions that will be presented by the students during the Conference. Analyze each of these; give reasons why you would reject any of them; and arrange them in order of merit.

From the data which you have assembled, you should now prepare a list of questions (not limited to those furnished) which you intend to ask at the Conference. Those questions should be drawn and arranged so as to *force* the Class to work out a *satisfactory* solution. The questions should be phrased and arranged carefully, so that there can be no doubt as to what is desired.

Having previously thoroughly prepared yourself for your Conference, including the enlargement of charts, maps or diagrams, etc., if desirable (and they should be sufficiently large to be easily read by the Class), you should arrive at the place of meeting in *ample* time to set the stage, as it were. If a school classroom is utilized, the room should be comfortably ventilated; those things which might distract the attention of the Class from the subject at hand, should be removed. In other words, blackboards should be erased and the chairs arranged so that the Class will be comfortably seated compactly *in front* of the instructor, and their attention directed towards the instructor and his well illuminated, visible chart or map. When used, all charts should be covered until needed, and then displayed one at a time. Glaring lights that might annoy the Class should be shaded or extinguished. If out of doors, *you* should face the sun, rather than the Class, and preferably with your back to the wind. Also, if *noise* is set up in contravention of the speaker, he has a very definite obstacle to overcome. All the necessary equipment, such as a map-pointer, chalk, etc., etc., should be provided beforehand. The set-up should reflect efficiency and simplicity.

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*Editor's Note: This article emanated as a Training Memorandum from the Headquarters of the Third Military Area (VIII Corps Area), Denver, Colorado.

When the Class assembles, the instructor, neatly and inconspicuously attired, should appear relaxed and be ready to begin his Conference. Observe decorum and dignity.

3. *Presentation of the Conference.*

The problem now is not only to gain the attention and interest of the audience, but to hold it. Give your audience a good looking over. They are looking at you and you are meeting them on their own terms. You are looking at them individually. Your attitude reflects your confidence and your interest, and thus the attitude and interest of your audience. Communication with them is a matter of self-projection. Visibly, your *posture* enters into it. Don't lounge. Feel free to use any natural gesture, but do not overwork it by repetition. It soon loses its force; but if used sparingly it will help gain and retain attention. It should be remembered however, that nervous pacing of the floor; jingling of coins; pulling one's nose or ear, chewing gum, tapping or chewing a pencil, and other unnecessary movement is a definite distraction, and detracts from one's personality. Your attempts at comedy (sense of humor) should never embarrass any member of your Class.

The speaking voice should be a natural, conversational one, modified to meet conditions and circumstances. The tone should be sufficiently loud to reach every member of the Class without being so loud as to be nerve-racking. Avoid a monotone or staccato effect of the voice.

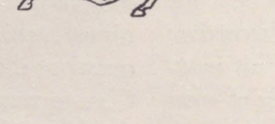
Introductory and explanatory remarks should be brief and *without apology. Avoid long periods of reading.* In referring to your chart or map, use a map-pointer; never turn your back to your audience or stand in their line of vision—*talk to the Class.*

No Conference should be considered a success *unless every person in attendance has participated in it.* You can insure and control this participation only by the question and answer method. First ask your question, allow a moment for thought, and then designate a student to answer. Insist upon having a definite answer to each question that you propound. As *WHY?* Insist upon brevity in an answer; don't permit a Conference to address a long harangue to the Class, and this also applies to yourself. Assume that those present have gained some information on the subject through Army Extension Courses. Should any members of the Class lack this basic knowledge, all you can do is to hope that your effort will stimulate their interest to the point when they will enroll in the appropriate course. Don't hold your informed Conferees while you give basic instruction to one who has neglected to inform himself. Have him see you about it after the Conference.

Allow sufficient time before the close of the Conference to answer questions. For a two-hour Conference have a half-time break of from five to ten minutes.

When you have for your subject a historical example, impress upon the Class that it is an *actual war situation,* and compare that action with what we might expect now with our present improved weapons and organization.

When practicable, summarize the Conference giving added emphasis to the principles involved.



Letters to the Editor

Sir:

This is to endorse the ideas expressed in "An Editorial" appearing in the November-December issue of the Cavalry Journal. It most ably presents the rôle to be performed by American Cavalry in accordance with the traditions for its most effective employment and under the missions now assigned to it by the War Department. In my opinion no arm can progress in its armament, organization, and in up-to-date tactics and technique unless its missions are clearly defined and the future rôle it is to play as a member of the Army combat team is properly envisioned by the War Department.

Also I want to tell you that the next to the last paragraph of the article "Little Phil" describing how Sheridan used his cavalry as a constant "threat" for "recovery of lost offensive by armies of the future" is applicable equally to horse or mechanized cavalry. In fact I believe the strategic radius of action of mechanization greatly increases the opportunity to pursue these tactics in the future. I do not mean by this that we should avoid combat with either horse or mechanized cavalry. We can use our mobility to "spar for an opening." When we find it we strike, and the more determined and powerful this blow can be, the more devastating will be its effect. But just the same, we should realize that the mere presence of a strong cavalry force moved rapidly and unexpectedly to a flank, or to a strong key position, will frequently entirely disrupt the vital and carefully prepared plans of a much larger, slower moving hostile force.

C. L. Scott,
Colonel, GSC. (Cav.)

* * *

Dear Sir:

The article on the Seventh Cavalry Brigade in the Plattsburgh maneuvers, by General Adna Chaffee, was particularly interesting to me, not only for the descriptive and lucid writing, but because I was an umpire with the 1st Cavalry, Mechanized.

When I came to his suggestion that there were not enough umpires I knew that was true from my own experience—at least with the Mechanized outfit. In fact on one occasion, I was sorry I did not have a few other Cavalry Umpires on my side. The driver of my umpire's combat car became enthusiastic in one charge, and I, a poor noncombatant found myself in madhouse of a M. G. firing over my ears. We charged through a large N. G. Infantry force, and before I could emerge from my dugout and change my iron derby to an umpire's hat, I was condemned as an idiot by the N. G. colonel and ruled out by a half dozen Infantry Umpires. When I tried to get a word in and announce that I too was an umpire, one choleric umpire wanted to know where I ranked. The platoon commander of the Tanks was neglected during the umpire skirmish. I cite the above annecdote to prove several following points.

In the first place, I believe that an umpire with the Mechanized Cavalry should ride in a side car. When I was assigned to a combat car it was thought I could be on the job during any combat. But the above proved I was too much in the combat. I could have ridden to a flank in a side car and witnessed the scrap through field glasses, etc. Also the combat cars are needed for the strength in force.

In the second place, an umpire should not be loaded down with a lot of equipment. To function as an umpire in the above phase, it was necessary for me to change hats, grab an armful of signal flags, papers maps, etc., clamber out of the turret, get all tangled up in the flags, do a dance of the seven veils, and try to make a decision. Frequently just as I untangled myself and got my breath, conditions changed in a flash, and then we moved off. To assist the umpire, I would recommend that the equipment issued be a minimum. If some sort of a small Very pistol, of sufficient strength to control a close-in situation. For instance Blue to signify Blue superiority, and Red for its superiority.

Reading General Chaffee's article called to my mind another weakness in our present maneuvers system. Neither the umpire nor the troops can decide half the time whether the blanks are fired by the enemy or friendly troops. One night General Chaffee said to me that it was difficult to decide whether some artillery firing at that moment was the enemy or not. To overcome this uncertainty have thought of an idea—it is just an idea and I have not investigated either the possibility or feasibility of it. If it were possible to use some kind of powder in blank cartridges, Springfield, M. G. and artillery to fire with a colored flash—just blue and red would be enough, so that both the enemy and the umpires could tell from the flash whether the Blues or Reds were firing, how simple and useful it would be. It would not even be necessary to have all the blanks filled with the colored powder but say one out of every clip as in tracer ammunition.

There may be no new thoughts or useful ones in the letter but anyway they are my ideas and experiences. The tanks were fine and efficient but I hadn't developed the proper seat before Plattsburgh to enjoy the ride.

G. Galwey,
Major, Cavalry.

EDITOR'S SADDLE

Rating of Remounts by Using Agencies

Some enlightening factors on remounts and some problems of the Remount Service have recently been called to the attention of The CAVALRY JOURNAL and are presented herewith for the contemplation of those of us who are the users:

As one of the important constructive means by which improvement in remounts may be accomplished, the Remount Service has for some time requested from receiving units a rating as to suitability on all remounts issued. This rating is accomplished on R.S., Q.M.C. Form No. 15, which also has space for rating the health and flesh of each individual remount as a means of a check upon the general health and condition of horses when issued. The Remount Service insists that the rating as to suitability be made by a competent officer of the line who has had considerable experience with mounted troops and who may be counted upon to have a sound knowledge of the requirements of the maching horse. We all realize that many competent veterinarians and many excellent riders of show horses may not necessarily have the soundest conception of the qualifications of a marching horse—trooper's mount, pack horse, etc.

No one can dispute the general excellence of horses provided our mounted services at the present time. Nor can there be any argument as to the great improvement in military horses since the inauguration of the Remount Service after the World War. The improvement as to type and quality has been constant and progressive from year to year; so much so, that some officers have begun to rate shipments of remounts apparently on the basis of high-class hunters instead of on the basis of a trooper's mount and pack horses for marching and maneuvering purposes. This is not only unfair to the Remount Service, but it displays on the part of the rating officer an unsound conception of what might be called a reasonable understanding of the requirements of his own arm. It is true that the Remount Service furnishes a large number of superior horses which approach in type and capabilities hunters which in the civilian market bring three to ten times the price paid by the Government. These superior horses have apparently become sufficiently numerous to lead some rating officers to the conclusion that all horses issued by the Remount Service should be up to their high standards. A little reflection on the subject will convince anyone that to hold such high standards for all or even the majority of the horses issued to the mounted services, is unreasonable.

We are well aware that the Remount Service gives serious consideration to the ratings given its shipments and in no sense treats them in a perfunctory manner. The rating given to each individual animal is not only referred to the depot which received, conditioned and issued that animal, but is referred to the officer who purchased that animal, with appropriate remarks from the Chief of Remount. When the situation warrants it, and conditions permit, unfavorable reactions on the part of the receiving units are personally checked by the Chief of Remount. This system has resulted in many cases of officers rating remounts unsatisfactory which were later determined to be satisfactory and admitted to be so by the unit to which they were issued.

The controlling factor in the acceptance of any horse for military service, or the rating applied by any receiving unit, is whether or not that horse can do the job for which he has been purchased and issued, not as to whether or not he can be successfully entered into show competition with $1,000.00 horses from civilian life. It is the duty of receiving units to give the most careful consideration to their rating of remounts and to properly adjust the standards by which they apply their ratings. By this it is not meant that an honestly unsatisfactory horse should be rated satisfactory or higher; if the Remount Service issues an unsatisfactory horse it desires to have it reported, together with the reasons why it is unsatisfactory, so that those concerned may profit by the mistake made. On the other hand, it can be seen how confusing and discouraging it will be to the various purchasing officers to have satisfactory, good remounts for troop use thoughtlessly declared unsatisfactory simply because they do not measure up to the high standards of a hunter or officer's charger.

* * *

Mobility and Speed

In this issue appears an interesting article by General Henry J. Reilly in which he states that too often the word "mobility" is used when "speed" is intended.

Mobility has more reference to tactical movements than to strategical movements. Troops transported by railroad cars or motor vehicles over available roads for long distances may have great speed in their movements without having mobility after their arrival in a zone where tactics are required. By means of steamships, railroads, and motor vehicles, troops, including cavalry, can be concentrated, when unopposed by the enemy, at a strategical point with far greater speed than could be attained by marching cavalry. The assumption of tactical positions or locations, developments, deployments and battlefield movements, however, require not speed but mobility.

All arms have mobility, but horse cavalry, under many conditions, has a superior mobility for missions of tactical employment.

In his article in this issue, General Reilly gives some interesting and valuable examples from the Spanish Civil War of the employment of horse cavalry on missions where battlefield mobility was of paramount importance.

* * *

The Grade of Major

Since the permanent organization of battalions and squadrons, the grade of Major has become, perhaps, the most important grade in the army for attaining the efficiency of troops. Although the Major is not quite as intimately connected with the individual soldiers of his command as is the captain or platoon commander, he is close enough to have an intimate knowledge of the condition, morale, and training of his command.

Battalions and squadrons are the units most often considered in the minds of higher commanders when making tactical calculations, and it is only through the major that the colonel or higher commander can contact the troops quickly and with certainty.

These considerations would indicate that only good majors are useful, and that their selection should be made with care. (Contributed.)

* * *

Honor Roll

The following organizations occupy a place on the Cavalry Honor Roll by maintaining 100% membership in the Cavalry Association:

National Guard:

- **103d Cavalry**
- **104th Cavalry**
- **106th Cavalry (Michigan Component)**
- **112th Cavalry**
- **113th Cavalry**
- **114th Cavalry**
- **108th Cavalry (Georgia Component)**
- **Headquarters, and Headquarters Troop, 52d Cavalry Brigade**
- **Headquarters, and Headquarters Troop, 57th Cavalry Brigade**
- **Headquarters, and Headquarters Troop, 24th Cavalry Division**

Organized Reserves:

- **308th Cavalry (72% Membership, highest in that component).**

Of the Regular Army commissioned personnel, 98% are members of the Cavalry Association.

The United States Cavalry Association

Organized November 9, 1885

The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—Article III of the Constitution.

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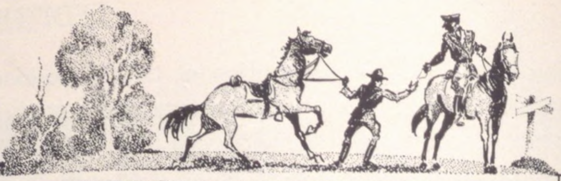

NOTES *from the* CHIEF *of* CAVALRY

What Would You Do?

"THE TROUBLES OF A LIAISON OFFICER"

"You are aware, of course, Captain," said the brigade commander from the shade of the apple tree at D. SMITH, "that Colonel Rivers is a rugged individualist. So if I did not consider you an especially tactful and observant young officer I would not be assigning you to Rivers' regiment as a brigade liaison officer for this attack."

Captain Lee Yason murmured a polite phrase. The old applesauce. He was sick of his job already.

"You haven't much time," pursued the brigadier. "I've radioed Rivers that we'll adopt Plan 4 and he will start the main attack approach in a few minutes. Take my car down to CR 480. You can get a horse there from Rivers. And now, if you've made a careful study of those air photos you ought to be a big help in guiding Rivers down to RJ 490 where he can start the attack called for in Plan 4. I suppose I ought to go there myself, but this time I just can't,—" His voice trailed off.

In the general's car Captain Yason considered his air photos, together with what could only be described as his predicament. His last contact with Colonel Rivers had come during the spring horse show when, as a judge, he, Yason, had been forced to disqualify Mrs. Rivers' hunter for some typical Rivers shenanigan. And now this Plan 4. A hot one if you asked him! Plan 3 would have been the Yason choice, involving a closer envelopment from the CR 486 vicinity instead of the wide move from RJ 490 as in Plan 4. The brigade would be kept in hand much better. It would be—but here he was. And here was Old Man Rivers and his entire regimental staff mounting up and ready to take off, with the regiment getting into approach formation.

Yason could feel his neck getting red as Old Man Rivers expanded his theme.

"A guide, hey?" the old gentleman cackled through his stained mustachios. "Why, young man, you are forgetting Geronimo Jeeman, my S-2 and Apache Jack Spavin, my S-3. These boys have been to Leavenworth and can lose their way quicker than your whole brigade staff put together. Now don't bother me any longer. Just relax over in S-4's auto and look at your pictures. I'm in a hurry to get this outfit into position."

"But, sir, can't I have a horse?" asked Captain Yason.

"What makes you so sure you'd know a horse if you saw one?" shot back Old Man Rivers with a meaning leer, as he trotted off to give the covering detachment its first bound.

Fuming, Yason got into the car with the S-4. "See," he sputtered, "talk about a guide! They need one already, going straight east instead of southeast."

The S-4 was admiring the effortless grace with which the regiment had swung into approach formation. In a few moments they would be alone and S-4 could go back to the division DP and see if the beer had arrived okay.

"Nothing wrong, at all, Yason," he said, "you're overwrought. It's a straight line from here to CR 486, and hardly two miles. No guide needed. They're practically there, —"

"But that's the place called for in Plan 3," interrupted Yason. "Brigade wants Plan 4 and an approach through that heavy timber to the south. There's been a horrible tie-up!"

"Well, now, all I know is that Spavin told us that the general had radioed to start on Plan 3. Personally," confided the S-4, "I don't think our radio operators are so hot. Here! What are you going to do?" he cried as Yason struggled to his feet.

WHAT WOULD YOU DO?

(For solution, see page 72)

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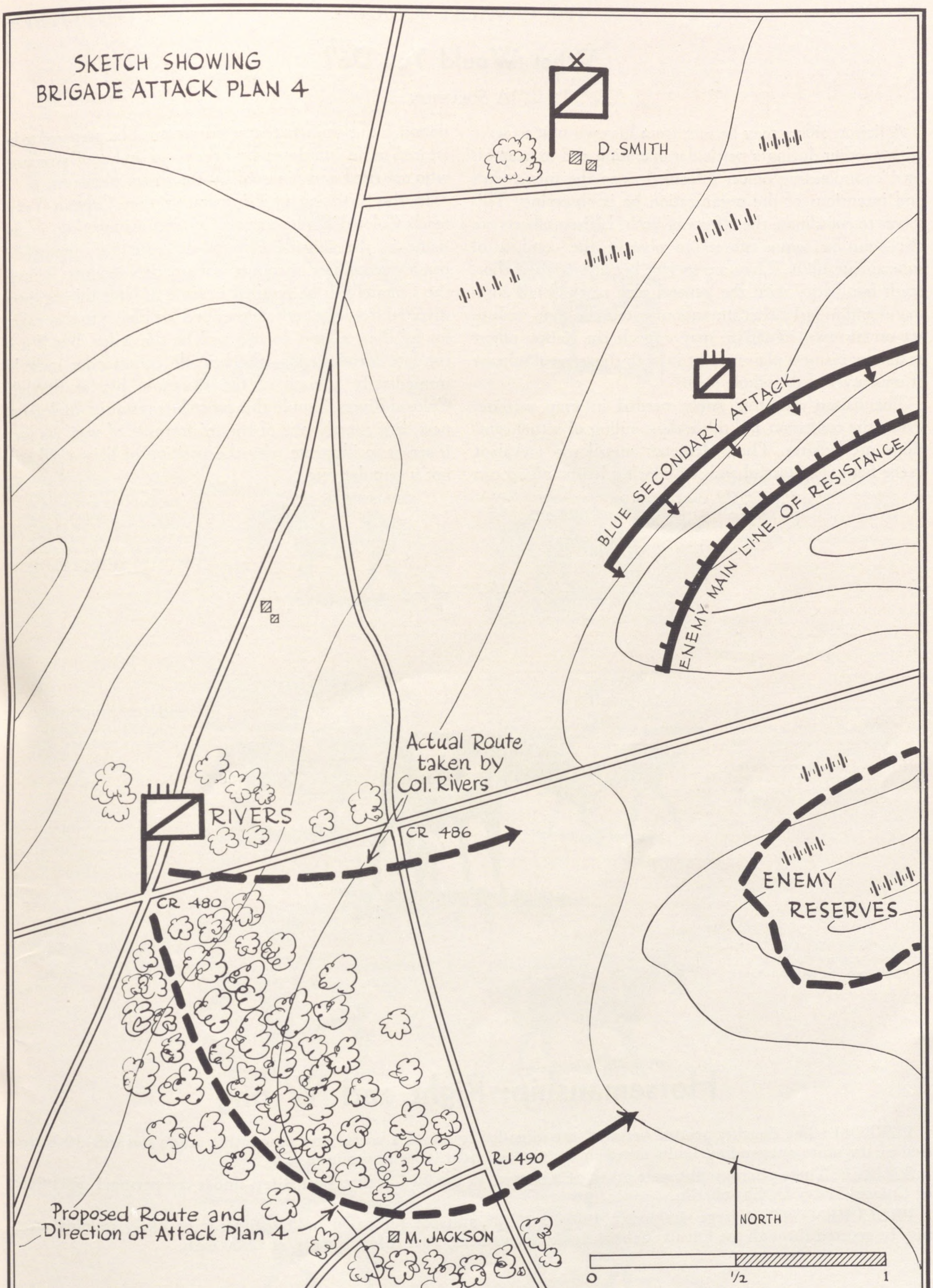SKETCH SHOWING
BRIGADE ATTACK PLAN 4
D. SMITH
BLUE SECONDARY ATTACK
ENEMY MAIN LINE OF RESISTANCE
Actual Route taken by Col. Rivers
RIVERS
CR 486
CR 480
ENEMY RESERVES
RJ490
Proposed Route and Direction of Attack Plan 4
M. JACKSON
NORTH
0
1/2
1
MILES

What Would You Do?

A Solution

A liaison officer may be sent from his own unit to serve with another during a particular operation and to keep his own commanding officer informed as to the movements and intentions of the organization he is observing. This serves to coördinate the efforts of both. Liaison officers are also sent by senior officers to observe the conduct of subordinate units. They are so sent because of their thorough familiarity with the general plan of the high command and in order that the subordinate, who may wish to act on his own initiative, may consult the liaison officer as to how his new plan may fit in with the general scheme of maneuver of the whole force.

The liaison officer is rarely needed in map warfare, where the confusion and misunderstanding of actual campaign are lacking. These elements are all too prevalent in the field. The tactful and self-effacing liaison officer can do much to eliminate them. But he must be prepared to be treated as an interloper by command and staff personnel who are tried and harassed by their own problems.

In this situation it is imperative that Captain Yason reach Colonel Rivers at once by commandeering, in the name of the brigade commander, the S-4 automobile, passing scout cars or convenient troopers mounts. Perhaps the Colonel can be reached in time to have the regiment diverted from the route prescribed for Plan 3 to that called for by Plan 4, and no one will be the wiser. But if it is too late for diversion, the brigade commander must be immediately advised of the situation, by, or through, Colonel Rivers. Should this procedure result in unpleasantness, it is merely one of the misfortunes of war. As such it serves to illustrate why the position of liaison officer is not a popular one.

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Horsemanship: Right and Wrong

PURPOSE: The sketches printed herewith are intended to afford a useful and practicable guide towards the correction of the more outstanding faults noted in the average rider. (See opposite page.)

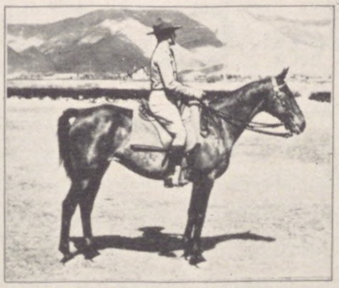
SOURCE: These photographs were taken of a trooper in the 2d Cavalry, Fort Riley, under the personal supervision of Colonel Harry D. Chamberlin.

PROCUREMENT: A large size poster, 19½" x 25½", suitable for troop bulletin boards or likely training areas, may be secured through the Cavalry School Book Department, Fort Riley, Kansas, at $2.00 each.

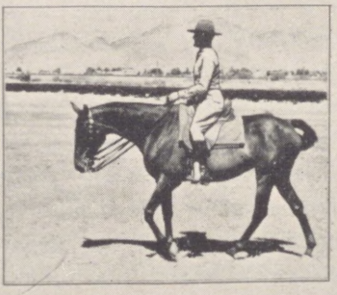
RIGHT

BELOW, THE RIDER IS IN BALANCE, WITH HIS CENTER OF GRAVITY CONSTANTLY OVER THE DISTANCE BETWEEN HIS KNEES AND HEELS. THIS CAN ONLY BE ATTAINED BY KEEPING THE BACK NATURALLY ERECT AND SLIGHTLY CONCAVE AT THE LOIN. NOTE THAT HIS BUTTOCKS ARE WELL TO THE REAR AND THAT THERE IS NO WEIGHT ON THE CANTLE, DUE TO THE FORWARD INCLINATION OF HIS BODY FROM THE HIP JOINTS. BEING IN BALANCE, HE IS ALWAYS ABLE TO STAND IN HIS STIRRUPS WITH HIS WEIGHT IN HIS HEELS AND ON HIS KNEES WITHOUT FIRST HAVING TO LEAN FARTHER FORWARD. HE RIDES "LIGHTLY" BECAUSE HIS REINS ARE LONG, PERMITTING THE HORSE TO EXTEND HIS NECK AND HEAD; BECAUSE HIS RELAXED FINGERS, WRIST AND ELBOWS MAKE HIS HANDS SOFT AND GENTLE; BECAUSE HE IS "WITH HIS HORSE"-NOT "BEHIND HIM."

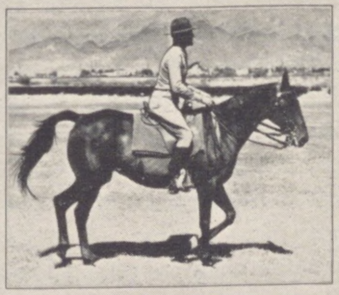
1. HALT: REINS LONG; HEELS AND KNEES DOWN; TRUNK ERECT AND SLIGHTLY INCLINED FORWARD FROM HIPS; HEAD, CHEST AND EYES UP.



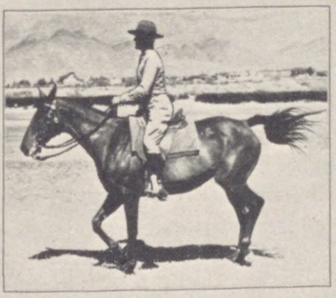
2. WALK: REINS LONG, ALLOWING HORSE FREEDOM OF HEAD AND NECK; FINGERS, WRIST, ELBOWS RELAXED, GIVING SOFT HANDS; TRUNK INCLINED FORWARD; CORRECT POSITION OF LEGS; CHEST AND HEAD UP; BACK STRAIGHT WITHOUT STIFFNESS.



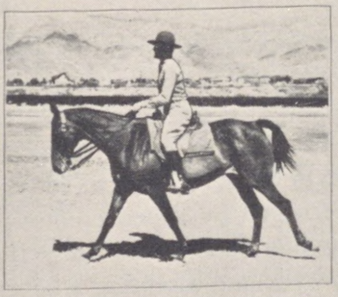
3. POSTING TROT-RIDER COMING INTO SADDLE: SAME REMARKS AS UNDER PAR. 2.



4. POSTING TROT-RIDER RISING OUT OF SADDLE: SAME REMARKS AS UNDER PAR. 2

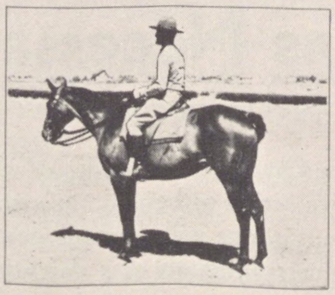


5. GALLOP: SAME REMARKS AS UNDER PAR. 2.

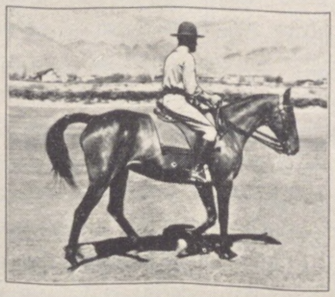


WRONG

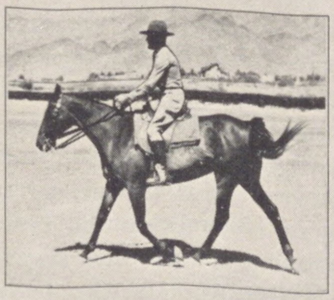
BELOW, THE RIDER IS OUT OF BALANCE; "BEHIND HIS HORSE." HE SITS ON THE CANTLE WITH BACK AND LOINS HUMPED; KNEES AND HEELS UP; HANDS AND ELBOWS STIFF; REINS NOT PROPERLY ADJUSTED. ALL THIS RESULTS IN PAIN TO THE HORSE'S BACK AND MOUTH AND MAKES THE RIDER'S SEAT INSECURE, CLUMSY AND UNMILITARY.



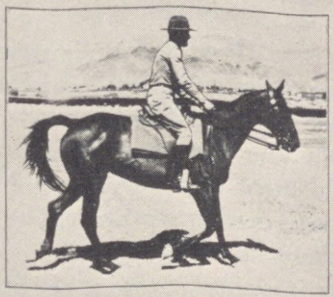
1. HALT: KNEES AND HEELS UP; BUTTOCKS UNDER RIDER, WHO THUS SITS ON THE END OF HIS SPINE WITH ALL HIS WEIGHT ON THE CANTLE, BACK AND LOINS HUMPED, REINS TOO LONG AND ELBOWS TOO FAR TO THE REAR.



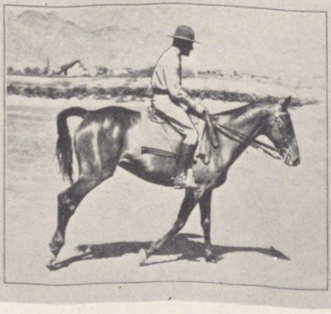
2. WALK: SAME REMARKS AS UNDER PAR. 1, APPLY. ALSO HANDS AND WRIST ARE STIFF, ELBOWS AGAIN ARE TOO FAR TO THE REAR, WHICH MAKES CONTROL OF HORSE DIFFICULT.



3. POSTING TROT-RIDER COMING INTO SADDLE: SAME REMARKS AS UNDER PAR. 1 APPLY, BUT HERE THE REINS ARE HELD TOO SHORTLY, GIVING STIFF ARMS AND UNSTEADY, BRUTAL HANDS.



4. POSTING TROT-RIDER RISING OUT OF SADDLE: SAME REMARKS AS UNDER PAR. 3.



5. GALLOP: SAME REMARKS AS UNDER PAR. 1.

General Hawkins' Notes

Conditions Necessary for Cavalry Attack

MOUNTED—DISMOUNTED

There is plenty of work for Cavalry to do besides attacking. There is much defensive action to be done in many various situations. But some missions will demand attack as the end in view, and others although of a defensive nature require attack against an enemy interfering with the movement necessary to place the troops in the desired position. Some situations require attack as a means of defense or as a part of a defensive action. And so, it is the mission and the various situations in which a Cavalry unit finds itself during the performance of that mission which determine what kind of action is used. All forms of action may be demanded in the execution of a single mission. The skill of the Cavalry leader is shown in the selection of the form of action to be used in each different situation as it arises. The skill of the subordinate leader is shown in the execution of the form of action demanded by his chief or by his own initiative.

If the decision is in favor of attack, then the question immediately arises as to the form of attack. Is it to be dismounted, mounted or a combination of the two? Or is it to be merely a harassing attack by fire against the flanks?

To make wise decisions, one has need of a certain mental training derived from study and thought as well as the actual experience in commanding troops. The average mind needs to remember a few principles stuck into his head in a simple formula made easy and familiar by much application in training.

In reading the book *Cavalry Combat,* one is much impressed with the very great number of small combats in which Cavalry was engaged against infantry, artillery and cavalry during the World War. These small combats took place during the employment of cavalry in almost every rôle assigned to that arm. Acting separately, Regiments, Squadrons, Troops, Platoons and squads, all found it necessary to go into action in the performance of their missions. Although dismounted action was used more than mounted action, one is interested to find that mounted action was necessary so often. This goes to show how important it is to train our troops for mounted action as well as for dismounted action. Neither of these forms of action can be neglected if we expect to have a well trained command.

And, indeed, there are plenty of examples to show that the larger units must be similarly trained. Although most of the action of larger units was dismounted, there are enough examples of mounted action by whole units, in the World War, and still more of combined action, to convince us that even large units must be trained to make skillful attacks mounted. Skillfully conducted dismounted action, offensively or defensively, is necessary and must be practiced as much as or more, in regard to hours, than mounted action. Practice in combined action is more necessary for large units than is the case for wholly mounted action or wholly dismounted action. The great necessity is for *skillfully conducted* action, whatever be its form.

One cannot read of war without being impressed with the necessity for training the individual soldier to be a fighter. It is not enough just to go along with others depending on numbers and the tactics of leaders to overcome the enemy. Each soldier must be made to feel an individual prowess in the use of arms and in his ability to take care of himself in a fight. How to use cover, how to fight at close quarters and a savage spirit to conquer. In other words he must become a warrior. The combats between small units may begin with dismounted action and turn into mounted action, or the reverse. Offensive action may terminate in defensive action or the reverse. In these affairs it is the warrior ability and the warrior spirit that win. Exercises can be devised which inculcate into the soldier the instinct to get forward and close with enemy in individual combat. In attack, tactics and long range supporting weapons are only useful to enable the mobile soldier to do this.

The great difficulty in training of officers is to give them something to help them in making the decision between the different forms of action. It is very difficult to formulate briefly stated rules for this purpose. If there are too many rules, they cannot be remembered or kept in mind for all occasions. If they are few and brief they fail to cover all situations. But we should not attempt to cover all situations. It is impossible. Therefore, it is wiser to lay down a few brief rules for general guidance, with the understanding that no two situations are exactly alike and that common sense and experience are, after all, the best guides.

But experience is hard to gain. In peacetime, the only way we have to gain tactical experience is to command a unit, large or small, in many tactical exercises and maneuvers, and to study historical examples of different forms of action. Therefore, although obvious errors should be corrected by superior officers, they should be careful not to humiliate or discourage those who are seeking such experience and accepting whenever possible the responsibilities of command.

The thoughtful reading of historical examples is one of the ways to train the mind to make correct decisions. For example, when the cavalry officer wonders how decisions are made as to whether to fight mounted or dismounted, he should study these historical examples such as are in some measure provided for him in the book before referred to—*Cavalry Combat*. Those experiences of other officers in war situations become his own experiences. Their successes, their failures, their correct procedure, their errors, all become his own. His mind becomes saturated with experience, and he feels that he has something, difficult to describe or to transform into exact rules of procedure, but nevertheless there in his mind and helpful to him when he must make decisions of his own.

The following principles concerning attack, mounted or dismounted, may be helpful:

1st. You must have *superiority* of some kind over the enemy in order to attack at all. This may be due to numbers, surprise, morale, better weapons, favorable ground.

2nd. To attack *dismounted* you must have good cover for each individual trooper at least every six or ten yards from the line of departure up to an assault line from which a charge can be made. *Supporting fire* is a necessity. Get your machine guns into action first of all. Then advance your rifle units towards the enemy with use of cover and at an angle as wide as possible from direction of the supporting fire. Do not attack dismounted over wide coverless plains.

3rd. To attack *mounted* you must have ground without such obstacles that will retard seriously the speed of your horses. *Fire support* is as important as for dismounted attack. Get your machine guns into action first. *Surprise* is almost always necessary. The *time element* sometimes demands mounted attack when *not all* conditions are favorable.

4th. When the command is large enough, *combined* mounted and dismounted attack is frequently the best. Mounted cavalry attacks combined with mechanized troops *may* become the usual form.

5th. Any attack, mounted or dismounted; must be made *skillfully*. *Supporting fire;* deployment in *successive lines;* use of *reserves; rally points,* especially for mounted attack of units larger than a troop. Piecemeal or uncoordinated attacks cannot be successful.

6th. *Security* and *Information*. *Covering detachments, patrols,* always necessary during the approach. And *combat patrols* during actual attack, except hastily prepared attacks of very small units.

7th. When *hostile mechanized units* are involved, antitank guns must be brought forward to engage enemy tanks or armored cars, and rifle units moved back or to one side, concealed if possible, to await the success or non-success of the antitank guns before proceeding further with the attack or other movements.

The German mounted attacks at Haelen, Belgium, Aug. 12, 1914, followed none of these principles. Result, costly failure.

The Russian mounted attack at Sestrangy in October, 1915, failed for the same reason.

On the other hand, many dismounted attacks have failed also on account of neglect of the above stated principles. And many dismounted attacks have failed where mounted attacks should have been successful. A number of examples in our own history could be recited in support of this statement. Several notable instances of the same thing occurred during the World War. In the British Campaign in Palestine, mounted attacks succeeded after dismounted attacks had failed at Beersheba, Huj and El Mughar.

A quotation from *Cavalry Combat* on the affair at Sestrangy is apropos: "As to General von Poseck's comment that a charge, no matter how well started, properly echeloned and boldly executed must finally break down before the enemy's machine gun, rifle and artillery fire, one might also include that *any form of attack ever devised* must eventually fail if subjected long enough to machine gun, rifle and artillery fire. The cavalry charge is not at all peculiar in that respect. If, however, it is meant that the charge must break down under conditions when a dismounted attack would succeed, then one might add the words *not always,* as evidenced by the many historical examples in the World War; where charges were made under proper conditions they produced results far out of proportion to the number engaged. One point, however, was very clearly proved—that a charge made *unskillfully* against modern weapons is almost sure to fail disastrously. When the terrain obstacles are such that the galloping horse loses speed and cannot reach the point of hand to hand combat; when the element of surprise is absent; when fire support is inadequate; when extended order formations are impossible because of defiles or bottle-necks; under such conditions it is pure folly and suicidal to attempt a mounted charge. Officers and non-commissioned officers must be taught to think, to evaluate the elements of each situation, to understand the possibilities and limitations of the various means under their control and to apply those means to the actual situations in accordance with the eternal principles of War."

The truth is that in the World War, mounted attacks succeeded in almost every case where the 1st, 3rd, 4th, 5th, and 6th principles stated in this paper were followed. There is no doubt that most of the actions of large cavalry units, in important cavalry missions like delaying actions, will be dismounted. But the possibilities of well executed mounted action must not be overlooked. Infantry in good condition and in defensive positions all ready to receive an attack should not be attacked frontally by mounted cavalry. But neither should they be attacked by dismounted cavalry unless the conditions stated in the above given principles are present and the attack is well executed. Cavalry missions rarely demand attack under *unfavorable* conditions.

But the hastily prepared actions of small units in sudden encounters with the enemy must be conducted often with little or no time for consideration of these principles, and leaders act more by instinct than by rules. There is, however, one rule that should be remembered. It is that small isolated cavalry units should be loath to dismount unless the mission distinctly requires it or the situation has cleared up sufficiently to indicate that dismounted action is clearly necessary.

When it comes to maneuvers, there is no surer way to discredit cavalry than to make mounted attacks when the conditions are unfavorable and the attack is unskillfully executed. Strangely enough, an officer can sometimes escape condemnation for making foolish dismounted attacks, but he will never escape it when he makes foolish mounted attacks. Constructive criticism, during training, is an art. It is an important form of instruction. Everything depends on how it is done. Praise should not be bestowed upon the leaders of exercises that are obviously faulty. But, usually, something can be found to praise, and then, honest mistakes can be pointed out without showing any lack of respect towards those who have made such mistakes. We are told to cultivate initiative and boldness. But we cannot cultivate boldness by scornful criticism of those who dare to be bold. Nevertheless, a restraining influence in favor of prudence is sometimes necessary. It must be insisted that certain simple principles be learned and followed both in the formation of a decision and in its execution.

General Allenby wrote, "A leader though he must be quick to see and to seize the opportune moment, must also have prudence and foresight. He should know exactly what he intends to do and what those under his command are capable of doing. Then when he takes a risk he takes it with open eyes and clear mind."

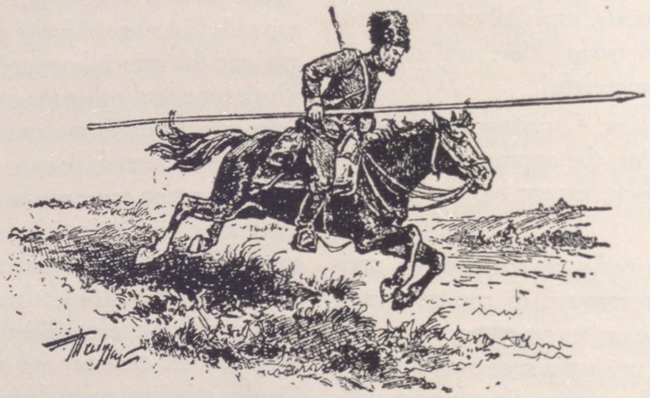
Finally, it may turn out that, in combination with light tanks, the most usual form of attack for large cavalry units will be mounted. This will develop if the importance of having mixed formations of cavalry and mechanized troops is ever properly realized.

But we have been referring in this discussion mostly to the attack. There can be no doubt that the majority of important cavalry missions will demand dismounted action of a defensive nature. Delaying actions, holding a position while awaiting the arrival of infantry or to cover the withdrawal of infantry, holding off flank attacks against our own forces by hostile cavalry, infantry or tanks, will generally require mounted maneuver and dismounted action. This requires much training of this nature. The quick occupation of a position, the rapid distribution of machine guns, the placing of led horses in small groups in sheltered places and properly guarded, positive action against the advancing enemy, and, when necessary, the withdrawal from action, all require training. After fighting a delaying action, a cavalry unit must often retire across country in dispersed formations, small units widely separated both laterally and in depth, in order to protect itself against pursuing airplanes. Widely deployed covering detachments, both in front and rear, are often necessary as well as combat patrols. All this requires coördination and initiative on the part of leaders of small units.

In such a movement, the proper disposition of the artillery and its formation, the antitank units, the regimental, brigade and division headquarters, the ammunition and other trains, if present, all require consideration.

From such a formation the commander may wish to assume another defensive position and perhaps to harass the flanks of the advancing enemy. Such things must be done expeditiously and with brief orders.

Truly, the training of cavalry is varied and requires much practice. The only answer is practice, practice, practice. A keen imagination guided by correct knowledge of cavalry rôles and a clear visualization of the various situations into which cavalry may be thrown is necessary. And then, nothing can be neglected in training for these contingencies. Everything else at a cavalry post is of secondary importance and should give way to this practice.



NOTES FROM THE CAVALRY BOARD

"The Cavalry Board invites any individual, whether or not a cavalryman, to submit for consideration constructive suggestions or ideas relating to new equipment, improvement of standard equipment, or to any problem or project under study by the Board. The Board will also welcome suggestions as to new problems that may properly be considered. Communications should be addressed to the President, Cavalry Board, Fort Riley, Kansas."

Magazines for Automatic Pistol, Caliber .45, M1911: The Cavalry Board recently received 200 magazines for the Automatic Pistol, Caliber .45, M1911, which will be subjected to extensive service tests. These magazines are an improved type and, it is hoped, will help materially to reduce the number of malfunctions experienced with this weapon in the past.

Tripod Mount, Caliber .30 M2, and Tripod Mount, Caliber .50, M3: An improved machine gun tripod, M2, for the light machine gun and a tripod, M-3, for the caliber .50 machine gun have been received by the board for test. These tripods are similar to the present standard tripods except that the spades have been strengthened by using heavier material and by adding a web reinforcement.

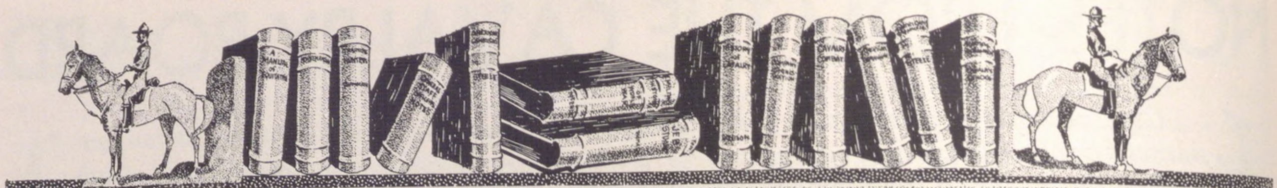
Sight, Telescopic, M-1, for Caliber .50 Machine Gun: The board is testing a new model telescopic sight, M-3, for the caliber .50 machine gun. The sight has been constructed so as to increase the clear eye distance by about one inch. Although slightly larger than the present T-3 sight, it appears to be an improvement.

Strip Film on Animal Management: The Cavalry Board is now engaged in the collection of subject matter and preparation of outlines of lectures or conferences to accompany a strip film on animal management. This strip film is designed for use in ROTC instruction, and, when completed, will consist of about 80 stills illustrating the various phases of instruction taken up in the lectures or conferences. In general it will cover the fundamentals of stable management, conditioning, care of animals on the march and in bivouac and first aid treatment of the most common injuries and ailments.

Unit Training Programs for Mobilization: Recent changes in organization and armament of cavalry units and the shortening of the time available for unit training in mobilization has made necessary a complete revision of these programs. New programs now in preparation will provide for a unit training period of only thirteen weeks as against sixteen weeks in the case of the old programs.

Streich 1-Ton Cargo Trailer: The Cavalry Board has recently received for test a Streich 1-ton, two-wheel cargo trailer. This vehicle has wheels equipped with standard pneumatic tires. It will be tested by the Second Cavalry with a view to determining whether it has any proper use in cavalry units.

Other current projects before the board are: Preparation of basic Field Manuals for the Caliber .50 HB, M2, Machine Gun, Ground Course, Caliber .30 M1919A4 Machine Gun Ground Course, the Pistol, Caliber .45, M1911, and the Cavalry Field Manual, FM 2-5 and FM 2-15; test and studies of Small Bore Practice in Caliber .50, Machine Gun Training; Antitank Weapon; Pull-type Single Shot Autofire Trigger Mechanism for Browning Machine Gun Caliber .50 M2, HB; Light Barrel for Machine Gun Caliber .30, M1919A4; Heavy Barrel for Machine Gun Caliber .50; Mobilization Training Programs for Enlisted Replacement Establishments; Small Arms Armament for Scout Cars and Motorcycles; Legging Top Boots; Service Gas Mask; Facepiece; Diaphragm Gas Mask Facepiece; Antigas Equipment for Horses; Sun Glasses; Aeronautic Type First Aid Kits; Low Quarter Shoes; Marching Compasses; the Tactical Practicability of Antigas Protection for Animals.



BOOK REVIEWS

SPORTS AS TAUGHT AND PLAYED AT WEST POINT. By First Lieutenant William H. Baumer, Jr., in collaboration with the West Point coaching staff. Military Service Publishing Company. 339 pp. $2.00.

This book, compiled and edited by Lieutenant Baumer, is a collection of facts, fundamentals and rules of the seventeen most popular sports. In it many famous United States Military Academy coaches tell their secrets of "how to do" and why.

Football, soccer, basketball, boxing, fencing, gymnasium, hockey, swimming and diving, wrestling, baseball, golf, LaCrosse, pistol, polo, rifle, tennis, track, training—these are the subjects covered with many diagrams of field positions and plays to illustrate the coaches' instructions. The method of play, posture, grip of the ball or bat—all are elaborately illustrated with 557 pictures.

Though of particular interest to boys from 10 to 18, the material is such that it will very easily demand and hold the attention of "boys" of all ages. It is of outstanding value because it becomes a one-volume library on the subject of sports and is highly recommended, particularly for those homes where there are enthusiastic boys interested in learning the hows and whys of athletics.

* * *

PERISH BY THE SWORD. By Major R. Ernest Dupuy. The Military Service Publishing Company. 302 pp. $2.50.

In his foreword the author describes this account as "one of the side shows of the World War." It is, indeed, a stirring illumination of the unbelievable flight and fight of the Czechs for liberty between 1914 and 1920 and of an American division battling shoulder to shoulder with them from 1918 to 1920.

"Their country having been captured by the Austrians 300 years ago the Czechs refused to fight for the Dual Monarchy in 1914 and deserted en masse to Russia. When the Eastern Front collapsed the Czech Legion, an army corps of 40,000 by that time, marched from the Volga to Vladivostok and back again, fighting both ways, held a new Eastern Front for two years and went home around the world to build a new nation."

Fighting side by side with the Czechs between 1918 and 1920 were the 339th American Infantry and 310th Engineers beyond the Arctic Circle; the 27th and 31st Infantry in gloomy, mysterious Siberia. Besides giving a deep insight into the Czech nature and outlook, this North Russian tragedy serves as a definite warning never again to squander American lives under alien command or on foreign soil.

The book is well illustrated with 90 photographs and 4 maps. The author, Major Dupuy, also wrote *World in Arms* and was co-author with Major George Fielding Eliot of *If War Comes*. He presents here an interesting and timely account of a little known subject.

* * *

KEOGH, COMANCHE, AND CUSTER. By Captain Edward Smith Luce. John S. Swift Co., Inc. Regular Edition, $3.00; De Luxe Edition, $7.50.

In this historical narrative, Captain Luce has written a fascinating story of the life and adventures of Captain Keogh, soldier of fortune, and of the army life and record of his horse *Comanche,* sole survivor of the Battle of the Little Big Horn.

During the preparation of this work the author had access to the official files of the Seventh United States Cavalry at Fort Bliss and has in this volume presented ably and fluently a careful history as well as a romantic and exciting narrative.

This work is a notable contribution to the literature concerning the Little Big Horn and contains much valuable source material on that subject.

* * *

THOROUGHBRED BLOODLINES. By Lieutenant Colonel John F. Wall. Published by Thoroughbred Bloodlines, Camden, S. C. $25.00 per set.

Reviewed by Colonel Harry D. Chamberlin

Colonel John F. Wall's revision of his *Thoroughbred Bloodlines* is a painstaking research summarizing, in a remarkably clear and interesting manner, a vast amount of information concerning the thoroughbred. No one interested in the horse should fail to purchase this story of the thoroughbred's origin and development. Volume I contains the narrative portion of the work, while Volume II is an ideal and convenient reference book of genealogical charts, bringing the pedigrees of our American thoroughbred families up to date. This volume also contains many magnificent reproductions of photographs and paintings of the most famous sires and race horses.

Cavalry Scout Car on distant reconnaissance. Note camouflage and local security measures.

MILITARY BOOKS

A General Staff Officer's Notes	$2.00
American Campaigns, *Steele* (2 vols.) per set	8.00
Balck's Tactics	1.75
Cavalry Combat	2.50
Combat Intelligence, *Schwien*	2.00
Company Administration (Cloth)	1.75
(Paper)	1.25
Court-Martial Practical Guide	1.00
Field Service Regulations	.75
History of Cavalry, *Desnison*	3.00
Infantry in Battle, 2nd Edition	3.00
Jeb Stuart, *Thomason*	2.00
Machine Gunner's Pocket Manual (Plain)	1.75
(With Clasp, Map Pocket and Slate)	2.25
Manual of Administration for CCC	.75
Map Reading, Sketching and Aerial Photos: (Leatherette)	1.80
(Cloth, $1.25), (Paper, $1.00)	
Modern Military Dictionary (Leatherette)	2.75
(Cloth)	2.50
National Defense (Reference Data)	.75
Officer's Guide	2.75
Outlines of the World's Military History, *Mitchell*	3.00
(De Luxe Edition)	3.75
Reserve Officer's Examiner	1.50
Tactical and Administrative Plates, *Brink*	3.00
Tactics and Technique of Cavalry, 8th edition	4.50

Discount on Quantity Orders

THE CAVALRY JOURNAL

1624 H Street, N.W. Washington, D. C.

Volume I begins with a discussion of the influence of the Barb, Arab, and Turk on the thoroughbred of today and continues with a particularly interesting description of how the blood horse and racing developed coincidentally with the history of England. This is followed by a discourse relating to the origin of the English and American Stud Books and a discussion of the Jersey Act which has rendered so many American thoroughbreds ineligible to the English Stud Book.

Succeeding chapters cover the three great thoroughbred lines of descent, *i.e.,* 1—the Godolphin Arabian, or Matchem; 2—the Byerly Turk, or Herod; 3—the Darley Arabian, or Eclipse. Here are recounted brief histories of many of the greatest stallions of the three lines, including their racing exploits. Particularly discussed are the English horses that have been imported to this country and whose blood and prepotency show to this day in American thoroughbred stock.

In a later chapter are listed the leading sires from 1934 to 1938, inclusive, along with a description of important sidelines not previously mentioned.

Chapter VIII takes up foundation mares and their various families, the genealogies of which are shown in detail on the charts in Volume II.

Colonel Wall emphasizes the fact that America is at present amply supplied with essential thoroughbred blood, and deals with the principles of mating in a succinct and illuminating manner.

In the appendices, much information is given concerning various contributing lines of blood. Also there is a discourse on breeding horses by the Bruce Lowe figure system, a review of Becker's *The Breed of the Race Horse,* as well as an account of our great international races between *Man O'War* and *Sir Barton, Papyrus* and *Zev,* etc.

It is impossible adequately to describe or review the great amount of information to be found in these books as they form a small encyclopedia on the thoroughbred and associated horse matters. It is reiterated that every horseman should read these two valuable books to which, thereafter, he will find himself referring many times.

* * *

AMERICAN RACE HORSES, 1939. By John Hervey (Salvator). Introduction by John Hay Whitney. The Sagamore Press, N. Y. 223 pp. $5.00.

This, the fourth volume of *American Race Horses* is, like its predecessors, a beautifully written and well illustrated record of the turf for a twelve-month period.

Colonel John F. Wall says of this annual publication, "It is true that *American Race Horses* differs from the spectacular and often inaccurate accounts of the daily press, from the cold facts disclosed in a racing chart, or the drab records in the stud book which relates the breeding of the animal. In *American Race Horses* John L. Hervey, better known as 'Salvator,' seems to assemble the most select of all that he writes of the best horses during the year and arranges the material in a logical manner making it easy to learn just what took place on the race-course."

The book is beautifully bound and well illustrated; the presentation is both logical and interesting; and the inimitable style of the author makes the story of each horse, with the accompanying pedigree, an intensely interesting, as well as valuable, account.

* * *

THEY WERE NOT AFRAID TO DIE. By A. C. M. Azoy. Military Service Publishing Company. 303 pp. $2.00.

This story of the American Revolution presents in a delightful narrative the characters in the scenes behind the scenes. Beginning with the story of Paul Revere and Longfellow's famous poem it unravels the romantic tale of the American struggle for freedom and portrays with charming intimacy the many characters who came and went on the original setting — Hamilton, Lafayette, Washington, Steuben, Rochambeau, Madame de Riedesel, Lord Germain, Benedict Arnold, Cornwallis.

This book is not a tedious history, nor is it a so-called historical novel. It is a tale of events as they once happened told with the ease of a natural story teller as if he himself had been present. It leaves technicalities of war and politics to others and paints a vivid and courageous picture of characters and events in the period from 1775 to 1781.

* * *

MILITARY HISTORY OF CARLISLE AND CARLISLE BARRACKS. By Lieutenant Colonel Thomas G. Tousey, Medical Corps, U.S.A. The Dietz Press, Richmond, Virginia. 447 pp. $3.50.

This volume of local and intimate history of Carlisle Barracks, Pennsylvania, shows an extensive and authoritative research into the annals of the past. Beginning with the Indian Traders of the Cumberland Valley in 1730 it traces with infinite care the development, growth, and historical significance of this ancient military post. Through the Revolutionary, Mexican, and Civil Wars the historical story unfolds. The author uses only authoritative source material, quoting often from old letters, newspapers and records long buried in dusty archives. Many of the incidents and stories have never before been recorded, and their accumulation in this single volume should be of particular value to those interested in historical records.

The latter part of the book describes the founding of the Carlisle Indian School and later the Carlisle Medical Field Service School. Many of the old landmarks and buildings are now being torn down to make way for new developments. In this volume, however, much of the romantic lore of the past and the truest mold of American history are intertwined and preserved for the future.

BOOKS FOR THE HORSEMEN

Hand Book for Horse Owners, by *McTaggart*	$ 2.75
Horse Training, Outdoor and High School, *Beudant* (translated by Lt. Col. J. A. Barry, U. S. Cavalry)	3.00
Horseshoeing, *Churchill,* 1933	1.20
Horsemanship, by *Brooke*	7.00
More About Riding Forward, by *Littauer*	3.00
My Horse Warrior	2.00
Polo Ponies, Their Training and Schooling, *Lieut. Paul G. Kendall*	7.50
Position and Team Play, *Devereaux*	1.50
Practical Light Horse Breeding, by *Wall*	3.50
Riding Forward, *Capt. V. S. Littauer*	2.00
School for Riding, *Captain Sergei Kournakoff*	2.50
Selection and Training of the Polo Pony, *Cullum*	5.00
The Art of Riding, *Lt. Col. M. F. McTaggart*	3.50
Training Hunters, Jumpers and Hacks, by *Colonel H. D. Chamberlin* (Original printing—limited edition)	10.00
Training Hunters, Jumpers and Hacks, by *Colonel H. D. Chamberlin* (British printing—one month for delivery)	4.50
Riding and Schooling Horses, by *Colonel H. D. Chamberlin* (British printing)	4.50

(Books on horsemanship by The Cavalry School are listed with the Departmental Texts on inside of back cover.)

BOOKS OF RECENT OUTSTANDING VALUE

A HORSEMAN'S HANDBOOK ON PRACTICAL BREEDING, by *Colonel John F. Wall,* U.S.A., Retired	$ 4.00
THOROUGHBRED BLOODLINES, by *Colonel John F. Wall*	25.00

ALL PRICES INCLUDE POSTAGE

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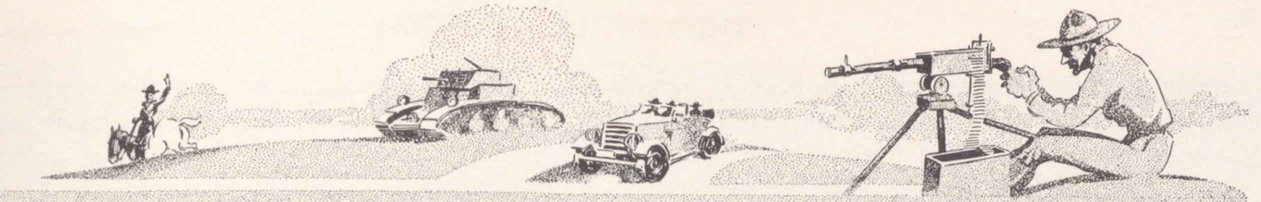
THE CAVALRY JOURNAL

1624 H Street, N.W. Washington, D. C.



ORGANIZATION ACTIVITIES

1st Cavalry—Fort Knox, Kentucky

Colonel Henry Baird, *Commanding*

As a result of the intensive recruiting campaign carried on by elements of the regiment, the command is now over strength and efforts of the First Cavalry have contributed to the success of the Corps Area drive.

Intensive combat training in preparation for maneuvers has continued through November and December. An increase in ammunition allowances has enabled all units to get in a great deal of valuable combat practice. Through arrangements with the 13th Cavalry and the 68th Field Artillery, problems have been drawn with the two regiments operating against each other. This type of training has proven most valuable, particularly to commanders and staff personnel. A series of small problems, conducted by squadron commanders, has greatly increased the tactical efficiency of the combat car platoons. Consolidated noncommissioned officers schools have proven a valuable method of standardizing training. In addition to regular regimental training, we are constantly engaged in experimentation and test of new equipment in coöperation with the Mechanized Cavalry Board.

In the field of athletics the regiment took part in the inter-post 6 man football league. This is the first season that this type of football was undertaken at Fort Knox. It awakened a great deal of interest. The First salutes the post champions, Col. Magruder's 68th Field Artillery, and promises them stiff opposition for next season. The basketball schedule is well under way with Headquarters Troop leading at this stage of the proceedings.

The Regiment regrets the loss by transfer of Lieutenant Colonel Kenna G. Eastham, former Plans and Training Officer, who left for Panama for General Staff Duty. The Regiment is very glad to welcome five Second Lieutenants who have joined for extended active duty under the Thomason Act. Lieutenants Alcorn, Tuck, Lucey, Burns and Gricius are fast getting oriented in the combat car troops of the regiment.

The Christmas holidays brought a welcome break in the activities of the regiment. All ranks are now back in harness, eagerly looking forward to the tasks which lie ahead.

* * *

2d Cavalry—Fort Riley, Kansas

Colonel H. D. Chamberlain, *Commanding*

Favored by an exceptionally pleasant fall the 2nd Cavalry has been able to accomplish much in its work for the Academic Division of the School, and at the same time achieve its own training objectives. Work on basic subjects has gone forward concurrently with squadron and regimental training to the point where we are now beginning to function as a regimental team.

During the month of December the regimental commander conducted a series of tactical and training inspections, the culmination of which was a free maneuver between the two reinforced rifle squadrons. Staff officers from the regiment supplemented by the Advanced Equitation Class of the Cavalry School acted as umpires for this maneuver which was highly instructive for all ranks.

Unfortunately on December 5, our oldest inhabitant, Major F. H. (Barney) Barnhart left us after five years service with the 2nd Dragoons in every possible capacity. At a regimental despedida held on December fourth, we bade the Barnharts farewell as well as honoring the departure of Lieutenant Colonel and Mrs. Kilian, First Lieutenant and Mrs. Richard H. Smith, and First Lieutenant and Mrs. A. A. Matyas. Colonel Kilian goes to duty with the Organized Reserves at Chicago, Ill., Major Barnhart to similar duty at Champaign, Ill., and Lieutenants Smith and Matyas to details with the Coast Artillery Corps; Lieutenant Smith in the Philippine Dept., Lieutenant Matyas at Fort Monroe, Virginia. We regret the departure of these officers and wish them God speed on their new duties.

Lieutenants George A. Wessels; John F. Wessels (brothers), and Ashur M. Mousel, Thomason Act Officers have reported for duty with the regiment.

First Lieutenant Carl LaV. Rickenbaugh, recently stationed at Randolph Field, Texas, has reported to the regiment for duty.

The normal training usually conducted at this time of the year was somewhat interrupted by the announcement of the closing of the present term of the Cavalry School, on January 31, 1940, and by the anticipation of orders detailing the regiment for temporary duty at Camp Joseph T. Robinson, Arkansas. However after extensive preparations the regiment was notified that it would remain at Riley and take over such post duties as were left open by the departure of the 1st Battalion, 3rd Field Artillery and Company A, 9th Engineer Squadron.

Among the athletic events, the Open Jumping Class at the Cavalry School Midwinter Horse Show, December 22, was won by *Redskin*, owned and ridden by Captain J. W. Wofford, Commanding Headquarters and S Troop, in a magnificent exhibition. Captain John H. Riepe, Adjutant, defended his Post Skeet Championship for the third successive year. Regimental officers, notwithstanding the fact that they have four polo teams undergoing winter instruction, sufficient interest among the bowling enthusiasts was found to enter a defending championship team. Although not so fortunate in this sport a very creditable showing was made.

Troop E, Captain A. A. Frierson, commanding, won the co-championship in the Post six man football league. In bowling, the Machine Gun Troop was the runner up.

A Non-Commissioned Officers polo team was organized in the regiment in November. Volunteers from each troop turned out for slow practice twice per week and from this group four men per troop were chosen to participate in games. Major Harry Knight is charged with the training of the team and due to weather and field conditions no out-door games have been played as yet. However, some interesting practice games have been played in the post riding halls. A challenge game between the Non-Commissioned Officers and Junior Lieutenants to be played this week is being looked forward to with much anticipation.

With the arrival of sub-zero weather, regimental instruction has largely moved indoors with emphasis placed on basic training, and horse-mastership. The fourth regimental Horse Show is scheduled for January 12, and should bring out some very interesting performances.

* * *

1st Squadron, 3rd Cavalry— Fort Ethan Allen, Vermont

LIEUTENANT COLONEL S. V. CONSTANT, *Commanding*

On November 1st the Squadron took over the administration of the Post from the 7th Field Artillery which departed for Fort Benning, Georgia. Shortly afterwards the 172nd Field Artillery, New Hampshire N. G. arrived for two weeks active duty training. They were all comfortably quartered in the 7th Field Artillery barracks.

Although practically every man in the Squadron had already taken on additional duties due to the reduced garrison an informal gymkhana was presented during the stay of the 172nd Field Artillery. An interesting program of six events was presented. The results were as follows:

1st Event—	Musical Chairs	
Won by	Pvt. Doyle	Troop B
2nd	Cpl. Fay	Troop B
3rd	Pvt. Sprano	Troop B
2nd Event—	Cow Boy Skit Trick riding squad from "A" Troop under Sgt. Odeno Scunizello.	
3rd Event—	Enlisted Men's Jumping	
Won by	*Come on,* Troop "A," ridden by Sgt. Wood	
2nd	*Lee,* Troop "A," ridden by Pfc. Gormley	
3rd	*Frankie,* Troop "A," ridden by Pfc. Ross	
4th	*Lady,* Troop "A," ridden by Cpl. Hazel	
4th Event—	Push Ball	
Won by	Troop "A" Team	
5th Event—	Tandem Ride Demonstrated by Troop B.	
6th Event—	Officers' Jumping (Tips counted)	
Won by	*Milly Russell,* ridden by Capt. T. C. Wenzlaff	
2nd	*Razor Back,* ridden by Capt. J. K. Mitchell	
3rd	*High Time,* ridden by Lt. Col. S. V. Constant	
4th	*Beatrice,* ridden by Lt. L. H. Cross	

The day after the departure of the 172nd Field Artillery the 172nd Infantry, Vermont National Guard arrived on the Post for two weeks active duty training.

Two individual phases of the Platoon Leaders competition were held in the Squadron soon after the departure of the Vermont National Guard. All the lieutenants were entered in the competition for officers, and all non-commissioned officers entered in a separate contest run over the same courses.

The 1st Phase consisted of a cross country ride of about five miles over 25 obstacles (pumps, stiles, etc.) and firing at 14 mounted pistol targets. The course was covered at the rate of 12 miles per hour.

The 2nd Phase was a two mile run dismounted cross country and on trails firing ten shots at a kneeling silhouette target half way through the course. The course had to be covered in twelve minutes.

Results of the 1st Phase were as follows:

Officers	*Time Penalty*	*Hits*	*Obstacle Penalty*	*Score*
Lt. Wm. A. Sussmann	1	12	0	97
Lt. R. E. McCabe	2	10	0	94
Lt. L. H. Cross	2	10	0	94
Lt. Wm. H. Ward	1	8	0	93
Non-commissioned Officers				
Sgt. Wood, Troop "A"	3	12	0	95
Cpl. Lombardi, Troop "A"	1	9	2	92
Cpl. Fay, Troop "B"	0	5	0	91
Cpl. Scott, Troop "B"	2	6	2	88

Results of the 2nd Phase were as follows:

Officers	*Time*	*Hits*	*Score*
Lt. Wm. A. Sussmann	12:28	10	100
Lt. L. H. Cross	14:04	10	98
Lt. R. L. Foster	11:56	7	97
Lt. C. E. Lippincott	13:26	7	96
Non-commissioned Officers			
Cpl. Hazel, Troop "A"	13:00	10	99
Sgt. Wood, Troop "A"	12:26	7	97
Cpl. Houghton, Troop "B"	13:40	8	96
Cpl. Scott, Troop "B"	12:56	7	96

While the competitions above were taking place the Post Quartermaster was busy renovating the Riding Hall in preparation for the 1st Winter Gymkhana. The lighting system was greatly improved both from the point of view of the spectators and the competitors. The old wooden supports of the balcony which obstructed the view for spectators were replaced by pipe supports. All woodwork was painted and the walls of the Riding Hall white washed.

A near capacity crowd witnessed the entertaining program of eight exhibitions and contests. The events were as follows:

1st Event—	Musical Chairs
Won by	Pvt. Sprano, Troop B
2nd	Pvt. Lemieux, Troop A
3rd	Pvt. Doyle, Troop B
2nd Event—	N. C. O. Jumping
Won by	*Beatrice,* ridden by Cpl. Di Palma, Troop B
2nd	*Streamline,* ridden by Cpl. Fay, Troop B
3rd	*Shady Lady,* ridden by Sgt. Wood, Troop A
4th	*Lady,* ridden by Cpl. Lombardi, Troop A
3rd Event—	Push Ball
Won by	Team from Troop "B"

FIRST SQUADRON, THIRD CAVALRY HORSE SHOW TEAM

Left to right: Sergeant Roy R. Wood, Lieutenant L. H. Gross, Lieutenant T. B. Harrington, Lieutenant Colonel S. V. Constant, Captain T. Z. Wenzlaff, Lieutenant R. E. McCabe, and Sergeant W. F. Northrup

4th Event—	Basic Officers Jumping (Tips counted)
Won by	*Jiggs Reach,* ridden by Lt. G. C. Benjamin
2nd	*Chubby,* ridden by Lt. T. C. Stone
3rd	*Greta,* ridden by Lt. C. E. Lippincott
4th	*Bo Bo,* ridden by Lt. W. J. D. Hewitt
5th Event—	Equipment Race
Won by	Troop B Teams Cpl. Ciliberto Pvt. Sprano
2nd	Troop B Team Cpl. Di Palma Pvt. Armonavicgie
6th Event—	Tandem Ride Presented by Troop "B"
7th Event—	Advanced Officers Jumping (Tips counted)
Won by	*Milly Russell,* ridden by Capt. T. C. Wenzlaff
2nd	*Black Beauty,* ridden by Lt. R. E. McCabe
3rd	*Bernice,* ridden by Lt. L. H. Cross
4th	*Razor Back,* ridden by Capt. J. K. Mitchell
8th Event—	Rodeo Ride by Troop "A"

Real winter weather did not arrive in Vermont until late in December, consequently the troops were able to drill outdoors much later than usual. The first heavy snowfall came on the last day of the year.

Captain Paul A. Ridge joined the Squadron from the Philippine Islands and was assigned duty as Post Exchange Officer, Agent Finance Officer and Recreation Officer.

Second Lieutenant L. H. Cross was in command of the movement of Company "E," 9th Q.M. Regiment from Fort Ethan Allen, Vermont to Holabird Q.M. Depot, Maryland to take part in the winter maneuvers.

* * *

4th Cavalry—Camp Joseph T. Robinson, Ark.

Colonel Robt. C. Rodgers, *Commanding*

The 4th Cavalry having been designated by the Chief of Cavalry to participate in the Cavalry Leadership Test for Small Units—1939, a board of officers, consisting of Major Lewis A. Pulling, Major Harold G. Holt and Captain C. C. W. Allan, was appointed to draw up the plans and conduct the test.

The test consisted of an individual phase for the platoon leaders and a leadership phase for the platoon leader and members of his platoon. In the individual phase each officer was required to: (a) Run 500 yards dismounted with full field equipment and immediately upon arriving at a designated point fire 10 shots with the rifle, any position, at 5 prone silhouette targets at an approximate range of 500 yards. (b) Upon completion of above to run 1,800 yards to a designated point, fire 10 shots with the pistol, dismounted, any position, at 5 prone silhouette targets, approximate range 50 yards. (c) Then to run 500 yards to his horse, mount and take cross country ride of 5 miles at 12 miles per hour, over obstacles and varied terrain and to fire 7 shots with pistol mounted, en route, at 7 "E" targets.

From the start of the individual phase until its conclusion no time out was permitted except for dismounted firings. Penalties were deducted for targets and obstacles missed, and overtime at each of four checking stations. All dismounted movements were at 5½ miles per hour. All contestants qualified.

The Leadership phase consisted of a reconnaissance in enemy territory and included security, mounted combat with ball ammunition, defense against mechanization, reconnaissance of a town, halt for the night, defense against air reconnaissance, dismounted combat, march discipline and care of animals and equipment. Total distance covered was 52 miles through the Black Hills, which involved a change in elevation of 2,000 feet.

The platoons left Ft. Meade at one hour intervals starting at 6:00 A.M. The entire first day's test was conducted in weather which varied from fog or cold drizzle to rain and snow. During the night's bivouac the temperature dropped to 16 degrees. The second day was clear but cold.

In spite of the above conditions all men completed the test in excellent physical condition and high morale.

All horses were judged ready to continue on the day following completion of the test.

Second Lieutenant John F. Swenson, 4th Cavalry, 1st Platoon Troop F, was declared the winner.

On October 26, 1939 a radio from Headquarters Seventh Corps Area, was received at Headquarters Ft. Meade, South Dakota referring to intensive field training for units of the Seventh Corps Area contemplating training of Cavalry units at Fort Riley for a period of at least three months, and for units to be prepared to leave home stations before November 15th.

Plans for the above were initiated, completed and the Regiment was ready to move at noon, October 28th.

Later instructions indicated that the personnel of the Regiment would be moved by motor convoy and the horses, heavy baggage and impedimenta by rail. Only articles listed in column 3 TBA would be taken.

Definite instructions were received on November 15th from Seventh Corps Area that the Regiment would proceed not prior to November 20th to Camp Joseph T. Robinson, Arkansas; moving by motor and rail and that a motor convoy consisting of 37 CCC trucks and 1 reconnaissance car, 17th Infantry drivers, would arrive at Fort Meade on November 19th to assist in transporting the Regiment.

MOTOR CONVOY

S-3 leaving Fort Meade November 17th preceded the convoy, making necessary reconnaissance for camp sites, wood, gasoline and the usual requirements, telegraphing information back and joining the convoy at Fort Smith, Arkansas one day's march from Camp Robinson.

The CCC trucks arrived at 3:00 P.M. November 19th, were serviced that afternoon and night, were ready, together with the organic motor transportation, and the motor convoy consisting of 67 vehicles departed at 6:15 A.M. November 20th for Camp Robinson.

The convoy, divided into 3 sections—2 personnel and 1 baggage—travelled at 10 minute intervals at 30 miles per hour, halting 10 minutes at the end of the first hour, and 15 minutes every 2 hours thereafter. Cold lunches were carried. Marches varied from 130 to 248 miles.

The S-4 section with Scout Car platoon preceded the convoy daily at 40 miles per hour, leaving camp 15 minutes before the First Section. Upon their arrival in camp, the customary arrangements were made and the camp laid out.

This same procedure was followed daily and found to be very practical.

Upon arrival of the convoy in camp, trucks were parked, shelter tents pitched and usual camp routine followed.

At Fort Riley, Kansas, 37 recruits and 3 more CCC trucks were received. Recruits were assigned to the Regiment and the trucks became part of the convoy. Also, one platoon, Troop A, 9th Engineers, Fort Riley and 13 trucks joined the convoy, now totalling 83 vehicles.

Over the entire distance covered, 1,350 miles, no accidents occurred, only minor repairs were required on any vehicle, and in spite of extreme zero temperature experienced the first night out with officers and men sleeping in shelter tents, and cold weather varying from zero to 20 degrees all members of the command arrived at Camp Robinson on November 26th in excellent physical condition and a high state of morale.

RAIL MOVEMENT

Prior to the Departure of the motor convoy, the heavy baggage and impedimenta were loaded in box cars at Sturgis, South Dakota, by details from the Regiment.

The horses had been maintained in troop corrals for 3 days prior to shipment and fed only a generous hay ration. Halters were left on and shanks hung in troop stables. Corrals were checked several times daily to detect injuries, replace broken or lost halters and to verify the count.

On November 23rd, after the departure of the Regiment, the loading of 616 horses for shipment by rail to Camp Robinson was accomplished by a detail composed of 50 men from the Band, Quartermaster and Medical Detachments none of whom were experienced in the handling of animals.

Loading was accomplished by leading from Fort Meade to Sturgis, a distance of 3.7 miles, three round trips being necessary to transfer the total number. The first Squadron, separated into troops, arrived at the C&NW stock pens at 6:00 A.M. or about 15 minutes before daybreak and were checked as to number and condition and placed in holding pens where shanks were removed and men were transported back to post by dump trucks to obtain another group. Loading into stock cars 36 feet long using two chutes was facilitated by leading one animal into car and herding the remaining 21 after the leader. Twenty-two horses were crowded into loading pen before loading proper was begun. Two cars could be loaded at one time. The personnel to accompany the shipment consisting of one veterinary officer and a veterinary detachment of five enlisted men with one 4th Cavalry Non-commissioned officer attached performed the loading. Time consumed: 3 hours and 15 minutes with approximately 30 minutes spent in waiting for horses to arrive. After necessary contracts with the railroad were accomplished the train departed from Sturgis at 10:00 A.M. Attendants were transported in a drovers car placed between last horse car and caboose.

Horses were unloaded by stock yards personnel at South Omaha, Nebraska beginning at 2:00 P.M. November 24th, 27 hours having elapsed since departure from Sturgis. Time changed from Mountain to Central en route thus gaining an hour. Unloading was accomplished within 30 minutes and horses were driven through alley ways and chutes to separate pens for each car. Pens and common chutes had previously been cleaned and disinfected by stock yards personnel under supervision of Bureau of Animal Industry. 12,000 lbs. of prairie hay had been requested and was waiting for acceptance inspection and was placed in racks immediately. Water was turned into troughs after animals had had access to hay about 30 minutes. Weather was cold but pen partitions protected from cold wind. Animals were under supervision of stock yards personnel during sojourn there but a continuous patrol and guard was placed on them in addition. No serious injuries were detected up to this time. Loading out started at 7:30 P.M., 5½ hours after unloading started and was completed at 8:30 P.M. Attendant personnel assisted yards employees and loading was without mishap.

The train departed from Omaha at 9:30 P.M. and stopped only for water, fruit freights and passenger trains and reached Kansas City, Missouri at 4:30 A.M. the 26th. One horse was down in the fifth car from the end but was assisted to his feet without unloading by the aid of a yards blower placed under his croup and was found uninjured. The train left Kansas City at 5:30 A.M. and arrived at Little Rock, Arkansas at 3:30 A.M. the 27th. It became necessary to switch one car at Russelville, Arkansas at 11:00 P.M. the 26th to unload as one horse was down and appeared in great distress. It developed that the apparent distress was caused by the fact that another horse was standing on the ear of the recumbent one and refused to move even with a great deal of vigorous urging. This animal got to his feet before the car was emptied and after minute examination and a chance to stretch his legs 20 minutes or more, was reloaded and the train proceeded. The twenty-eight cars were switched to Camp Robinson at 5:15 A.M. the 27th and were unloaded by personnel of the 14th Cavalry at 6:30 A.M. Four portable ramps were used and thus four cars were unloaded simultaneously. Animals were led to the 4th Cavalry area 2.7 miles distant by the same personnel who returned for additional horses. Unloading was completed by 7:30 A.M. Time 35 hours.

All cars were inspected at each stop of sufficient length and in addition experienced railroad officials examined passing cars for animals down at each division. During entire trip two horses kicked through car side and became hung between slats. One horse was caught within one foot of car roof and still retained the upright position. This same animal was the one that necessitated unloading at Russelville, Arkansas. Only one serious injury resulted from shipment and this was a timid private mount that was apparently thrown forcibly against the car side and developed a painful swollen hock resulting from an initial contusion on the point.

This rail movement over a distance of approximately 1,500 miles proved that even in peace time, through the excellent coöperation of the railroads, cavalry can be moved faster by rail than men can be transported by motor convoy.

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5th Cavalry—Fort Bliss, Texas

COLONEL C. P. STEARNS, *Commanding*

Having completed its part in the 1st Cavalry Division maneuvers held at Balmorhea, Texas, October 15-31, 1939, the 1st Cavalry Brigade (5th Cavalry and 12th Cavalry) under the command of Brigadier General J. M. Wainwright, left Balmorhea, Texas, November 1, 1939, en route to Fort Bliss, Texas, the concentration point of the entire 1st Cavalry Division.

The march overland to Fort Bliss from Balmorhea was made in seven days. The weather, except for one day, was perfect for marching. Each day the Brigade completed its march, in time to finish stables and have dinner prior to 1 P.M.

The Brigade arrived at Fort Bliss, Texas, on November 6th where it was reviewed by the Division Commander, Major General Kenyon A. Joyce as it entered the post. Post personnel and civilians of El Paso turned out to witness its entry into the post. The 5th Cavalry were guests of the 8th Cavalry for the noon meal.

At the termination of this march, the regiment had completed approximately seven hundred and sixty five miles of marching from the time it left Fort Clark, October 1, 1939. Since the beginning of the march to the first Balmorhea maneuvers a year and a half ago, the regiment has marched 2,260 miles.

After the regiment arrived at Fort Bliss, it moved into tents, which through the kindness of the 2nd Brigade, had been erected prior to our arrival. A general straightening out period ensued. The 5th Cavalry camp area was placed just southeast of the 82nd Field Artillery barracks.

The welcome given the Brigade by permanent troops stationed at Fort Bliss will remain for many years indelibly marked in the minds of officers and men of this regiment and the entire Brigade. The officers of the 2nd Brigade welcomed the visiting officers with a dinner the day of arrival. A hop honoring the 1st Cavalry Brigade officers was held by the 2nd Brigade, Saturday evening, November 11th. A Hunt and Hunt breakfast Sunday morning November 12th. The 82nd Field Artillery NCO Club and the 8th Cavalry NCO Club were placed at the disposal of non-commissioned officers of the Brigade. A new service club was opened several days after the Brigade's arrival. The club is centrally located and every effort is being made to make enlisted men comfortable and enjoy their stay at Fort Bliss.

Beginning the 15th of November, the intensive training period required by the War Department went into effect. Combat firing for all organizations of the regiment was held on the Castner Range during the first week. The following week a "two sided reinforced Brigade maneuver" was held. On the 27th of November the division gave a review and demonstration to the visiting Congressional Committee.

Having by this time become oriented in its new surroundings, the regiment was taking the intensive training period in stride. December opened with a "two sided reinforced Brigade maneuver" followed by additional Brigate and Division problems of two or three days duration.

The various Brigade and Division exercises have been extremely valuable in giving the larger picture of Cavalry operations to all ranks and grades. The time and space factors for operations of larger units are better understood and much has been learned to smooth out the actual troop leading of all units.

Since the regiment left Fort Clark, it has lost in officer personnel, Captain Harry D. Eckert, retired, Captain H. W. Ketchum, ordered to the Philippines, Captain E. J. Doyle, assigned to Headquarters 1st Cavalry Brigade, Major James C. Short, ordered to duty with the 2nd Division at Fort Sam Houston, Lieutenant George C. Minor, detailed in the Ordnance Department and assigned to duty as a student in the aviation ordnance course, Aberdeen Proving Ground, Maryland.

Newly arrived officers included, Major C. G. Hutchinson, Second Lieutenants R. L. Irby, C. J. Parsons, Jr., W. L. Turner, and R. W. Crandall. Lieutenant Colonel Gordon J. F. Heron, was assigned to the regiment from Headquarters 1st Cavalry Brigade. On December 2nd, seven reserve officers were assigned to the regiment under the Thomason Act for a year's active duty training: Second Lieutenants R. C. Miekel, Jr., W. K. Boyd, J. E. Shirley, A. P. Netterblad, C. G. Turner, W. T. Robinson, and J. P. Pringle.

The Inter-troop Basketball league has been completed. Headquarters & Service Troop won the regimental title having gone through all the scheduled games undefeated. At present, a schedule whereby the Division Champion will be named is in progress. The first game of this schedule, was played Friday night, January 5th between Headquarters & Service Troop, 5th Cavalry and Machine Gun Troop, 12th Cavalry, in which the 5th Cavalry team defeated their opponents by a score of 60 to 24. At the conclusion of this schedule, the Regimental teams will begin their schedule. All games are played at the Army Y.M.C.A. in El Paso.

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6th Cavalry—Fort Oglethorpe, Ga.

COLONEL JOHN MILLIKIN, *Commanding*

December 1st marked the date of reorganization of the 6th Cavalry as a Corps Cavalry Regiment. It was received with much enthusiasm since it took care of the horse soldier as well as the motor soldier. The Machine Gun Troop became the Service Troop. The 1st Squadron (Troop A and B) became the Horse Squadron while the 2nd Squadron became the Mechanized Squadron. The regimental strength remained at 659. Intensive training began immediately. Schools were started for Radio operators, Scout Car drivers, Motorcycle drivers and Mechanics. By the end of December 38 new Scout Cars had arrived and more are anticipated within the next few weeks. About 85 motorcycles are due to arrive in January and February. On December 27th a radiogram authorized an increase in strength to bring the regiment up to 1088 men. On January 1st Troops C and G were activated as the 3rd troop of the Horse and Mechanized Squadrons respectively. Both Squadrons are concentrating on training in Reconnaissance and Security missions, one as Horse Portee and the other as Mechanized Squadron. Firing with heavy machine guns, sub-caliber guns and 37-mm. AT guns will start soon to familiarize personnel with these weapons. It is hoped that M-1 rifles will arrive soon for the rifle and motorcycle troopers. The horse trailers will probably arrive sometime in March but daily training is going on in the 3 rifle troops with one large trailer, 3 trucks and improvised trailer bodies without wheels to accustom horses to loading. At a review on November 18th for General Hodges, Commanding General, 5th Division one rifle squad demonstrated loading and unloading. The trailer containing the squad (men, horses and equipment) passed in review with motor transportation. After the review it halted in front of the reviewing stand and at a signal from the General unloaded. Only 5½ minutes were required for the squad to unload, saddle and move away at the gallop. Returning to the trailer after the signal was given to load the squad dismounted, unsaddled, loaded men and animals and the trailer moved off in 4½ minutes.

Officers schools are in full swing. Officers have been assigned subjects for presentation covering various tactical missions the Corps Cavalry Regiment may be called on to perform. The problems are based on the terrain between Fort Oglethorpe, Georgia, Fort McClellan, Alabama and Fort Benning, Georgia and will be worked out on the ground after conference solution in the classroom. The problems cover every phase of action, from Reconnaissance and Security during the advance of the Corps to the pursuit or covering of retrograde movement after battle.

Chickamauga Park is becoming accustomed to new sights daily. Here horsemen on patrol are quietly gliding through the woods; a mile or two further on a Scout Car Platoon is reconnoitering a side road; on Wilder Field a Horse Trailer is loading men and animals of a light Machine Gun squad while on roads and trails everywhere motorcycles are chugging along.

Officers and men of the regiment are keen for their new duties and are determined that the new Cavalry shall perform its missions in the field in the same wholehearted and efficient manner as the old 6th always has.

Lieutenant Colonel John A. Weeks is back at his desk following a hazardous trip upon slippery Mississippi roads. His automobile was demolished by a dangerous skid but fortunately Colonel Weeks escaped injury.

Major Candler A. Wilkinson, following an extended illness with intermittent periods of hospitalization has been transferred to the Army and Navy General Hospital at Hot Springs for observation and treatment. The regiment extends best wishes for an uneventful and complete recovery.

Major and Mrs. Chester E. Davis, formerly of Headquarters 2nd Corps Area, who joined on January 2, 1940, are pleasant additions to the social life of the regiment and garrison.

A hearty welcome was also given 2nd Lieutenants Wilson M. Hawkins and Armistead R. Harper upon their arrival December 1, 1939. The arrival of these two badly needed junior officers relieves in a measure the shortage of officer personnel occasioned by the annual turnover.

Many of our officers and their ladies availed themselves of the privileges afforded by the holidays to make hasty visits home, or motor trips to visit friends in adjacent states. All are back either "in the saddle" or "by the wheel" in the "stream-lining" mechanization program which has rapidly swept our regiment before it.

Second Lieutenants Allie L. Martin, Nelle Murphy and Alvin O. Tucker, Army Nurse Corps arrived approximately with the New Year to fill needed positions at Fort Oglethorpe the home of our regiment.

Warrant Officer Joseph G. Garcia, Band Leader, assigned from the Hawaiian Department, is now on leave in San Antonio.

The Fort Oglethorpe Hunt is enjoying a very successful season. Hounds meet twice weekly. Since October we have hunted the farming country west of the park and have had some great runs. The best drag hunt of the season so far was held on December 30th in the Wallaceville section. Hounds drove with such speed and determination that after a 30 minute run the Master, one whip and two members of a field of 21 were the only ones in when hounds finally lost in the Cicero Johnson woods. The rest of the field finally arrived after about 10 minutes having come to the Master's horn. From there hounds again led us a merry chase but finally at the kill the entire field was together again. This year no Field Master is appointed and the members of the field are each riding their own line watching only not to override the Master. It seems to work out very well. A number of fox hunts have been held. No foxes have been killed to date but after all we want to *run* them not to kill them. On December 17th we ran one fox for 25 minutes without a check, holed him in and shortly after got up another one which we holed on the south side of Chickamauga Creek after a lively, fast chase. Two young members of the Field, Tommy and Dicky Hoffman, sons of Capt. H. T. Hoffman, were presented with the hunt collar and buttons by the Master after the Christmas hunt. They are good men to hounds and have well earned their buttons. All in all the 6th Cavalry hounds are giving us a great season this winter.

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7th Cavalry—Fort Bliss, Texas.

COLONEL WILLIAM W. WEST, *Commanding*

On December 12th the regiment held an informal horse show with three classes:

Class I. Novice Jumpers. Open to horses that had never placed in a Division or Post Horse Show, was won by Corporal Brett, Troop E, on *Gangster*.

Class II. Horsemanship for Noncommissioned Officers, was won by 1st Sergeant Shrout, Machine Gun Troop, on *Cloudy*.

Class III. Open Jumpers. Open to Officers or Enlisted Men, was won by Sergeant Hutson, Troop A, on *Just So*.

The Regiment participated in the Division Horse Show, Held on December 29th, with results as follows:

Green Polo Ponies—1st, 1st Sergeant Shrout on *Bontoc;* 2nd, 1st Sergeant Shrout on *Matilda;* 3d, 1st Lieutenant Wilson on his private mount *Regalo;* 4th, Major Haydon on *Little Chief*.

The Hunter Class was won by Lieutenant Maxwell riding *Taps,* while Private Lagrone, Troop B, riding *Captain* placed third in the class for riders who had never competed in a Division Horseshow. Corporal Brett, Troop E, riding *Cloudy* placed fourth in Horsemanship for Noncommissioned Officers, and Sergeant Hutson, on *Just So,* placed fourth in Open Jumping, after an exciting jump off.

The Polo Tournament held as part of the Sun Carnival activities, found the 7th and 8th Cavalry teams battling for the Championship. The 7th Cavalry team consisting of Lieutenant Colonel Allen and Captain Mudgett at 1, Lieutenant West at 2, Lieutenant Wilson at 3, and Major Haydon at 4, was defeated in the last few seconds of play in a very thrilling and exciting game.

The officers' dance sponsored by the regiment featured square dancing. The nationally famous *Blue Bonnet* set from El Paso was present with demonstrations and advice to those that wished to learn. On New Year's Day, Colonel and Mrs. West had open house for the officers of the regiment, their families and guests.

Major James M. Shelton has joined the regiment and is now S-3. Captain Noble was relieved from the regiment and is now helping the Division Staff further their training program as Assistant Chief of Staff G-3.

REGIMENTAL ATHLETICS

On January 4th, 1940 the Machine Gup Troop successfully finished their fifth straight time in the troop league to win the Regimental Championship in basketball. Troop "A" placed a good second losing only to Machine Gun Troop. All troops played a high brand of basketball and afforded their followers interesting evenings.

Out of the troop teams the "stand outs" were chosen to represent the Garry Owens in the Fort Bliss League which will open against the 8th Cavalry on Monday evening, January 15th.

The Regimental Inter-Troop Bowling league is off on the second round. Headquarters and Service Troop won the first round with only two losses. Credit for the highest average so far goes to Corporal Brown of Troop "A" with a 175. However, several others are crowding him for the season honors, and some expert rolling is expected during the second round.

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8th Cavalry—Fort Bliss, Texas

COLONEL JOS. P. ALESHIRE, *Commanding*

Thursday, November 23d, was jointly observed as Thanksgiving Day and Regimental Organization Day. In addition to the usual holiday observance, all troop commanders read a brief history of the Regiment and made a short talk at the noon meal.

On November 27th, a review of the entire Division was held honoring the visiting Senators and Representatives who were in Fort Bliss for an inspection of the Post, buildings, etc. The review was climaxed by several demonstrations by the various units and all participating were highly complimented on the high standard of training exhibited.

During the months of November and December several tactical exercises were held with the entire Division taking part. The exercises have been conducted by Major General Joyce. All have been free maneuvers, which have been very instructive and enjoyed by all concerned.

On December 12th, a Retreat Inspection and Parade was held.

A Regimental Horse Show was held on December 20th, winners in the various classes are as follows:

CLASS I—GREEN POLO PONIES

Captain C. H. Valentine, riding *Buckaroo,* first place. Captain R. M. Neal, riding *Baalbec,* second place. Lieutenant H. B. Wilson, riding *Rainy Day,* third place. Captain W. H. Greear, riding *Miss June,* fourth place.

CLASS II—NOVICE JUMPERS

Private First Class Thoid Crowley, Troop F, riding *Watson,* first place. Private James Corridan, Troop B, riding *Bashful,* second place. Sergeant R. L. Robertson, Machine Gun Troop, riding *Jeff,* third place. Sergeant A. T. Keeton, Headquarters and Service Troop, riding *Chico,* fourth place.

CLASS III—HORSEMANSHIP

Sergeant J. L. Prueitt, Headquarters and Service Troop, riding *Rhumba,* first place. Sergeant Albert Sanders, Troop F, riding *Naughty Boy,* second place. Sergeant A. W. Carnes, Troop F, riding *Roy,* third place. Corporal R. P. Meyers, Troop A, riding *Coco,* fourth place.

CLASS IV—OPEN JUMPERS

Corporal E. R. Austin, Troop E, riding *Kaiser,* first place. Private James V. Corridan, Troop B, riding *Bashful,* second place. Sergeant Albert Sanders, Troop F, riding *Naughty Boy,* third place. Corporal J. C. Plantier, Troop A, riding *Buddy,* fourth place.

CLASS V—HACKS

Captain W. H. Greear, riding *Roy,* first place. Miss Louise Miller, riding *Rhumba,* second place. Lieutenant E. McC. Dannemiller, riding *Mint Julep,* third place. Major J. S. Rodwell, riding *Sweetmarch,* fourth place.

In conjunction with the Southwestern Sun Carnival held in El Paso, Texas, December 28 to January 1, a Division Horse Show was held on December 29, with the 8th Cavalry winning the following places:

CLASS II—NOVICE JUMPERS

Sergeant A. T. Keeton, Headquarters and Service Troop, riding *Chico,* second place.

CLASS III—HORSEMANSHIP

Sergeant J. L. Prueitt, Headquarters and Service Troop, riding *Rhumba,* third place.

CLASS IV—OPEN JUMPERS, ENLISTED MEN

Sergeant Albert Sanders, Troop F, riding *Naughty Boy,* first place.

CLASS VI—OFFICERS' AND CIVILIAN HUNTERS

Lieutenant F. H. Gaston, Jr., riding *Stroll Along,* third place.

CLASS VII—OPEN JUMPING, OFFICERS AND CIVILIANS

Lieutenant R. E. O'Brien, Jr., riding *Baal,* fourth place.

The 8th Cavalry annexed the Southwestern Polo Championship by defeating the Garry Owens in a well played, hard fought game on Sunday, December 31. Several civilian teams also took part in this tournament.

The Regimental Basketball Team has started practice after the completion of the Regimental League which ended with Headquarters and Service Troop winning the Championship for the fourth consecutive year. In the Post play-off of the Regimental winners, Headquarters and Service Troop was defeated in the finals by Battery E of the 82d Field Artillery by a score of 45-44. The Post league will start on January 15th with teams from the entire division in competition.

Lieutenant Colonel E. E. Schwien has returned to the regiment for duty and has been appointed Executive officer. Captain W. H. Greear and Lieutenant E. M. Serrem have been assigned to the regiment. Captain Greear assumed command of Troop F, and Lieutenant Serrem has been assigned to Troop E.

Lieutenant Don R. Ostrander was relieved from duty with the regiment and ordered to Aberdeen Proving Grounds.

11th Cavalry—Presidio of Monterey, Calif.

Colonel Homer M. Groninger, *Commanding*

While 11th Cavalry training has been rushed through preliminary phases in preparation for the regiment's part in the forthcoming 3d Division maneuvers which open in January, Colonel Homer M. Groninger, 11th Cavalry and post commander, and his staff have been active in preparing for the broader phases of the 10,000-troop mock war.

The two-year construction and clearing program at Camp Ord, scene of the major portion of the new maneuvers, has been rushed to completion by Colonel Groninger. Major portion of the program was completed by December 3d, when the commanding officer was host there to the inspecting party of congressmen representing the joint military affairs committee. During the latter part of December 11th Cavalry troops furnished details to complete work on an additional camp site at Ord to house the incoming troops, and during the same period Cavalry staff officers conducted a series of reconnaissances for additional maneuver area in the central coast area, and also for beach-head positions from Santa Cruz to Port San Luis.

New officers to join the regiment since the last report in these columns are: Second Lieutenants Marshall Wallach and W. F. Hale of the 1939 Class at West Point, and James D. Greene of the same class who has been stationed with the Air Corps. Two Thomason Act officers, Lieutenants Archie M. Hendricks, Jr., of Lakeport, California, and Isadore Barr, of Springfield, Massachusetts, have been assigned during the last month.

The regiment was saddened December 23d when First Sergeant Martin Kling of Headquarters and Service Troop was crushed to death beneath an overturned scout car while returning from a reconnaissance near King City. The three other occupants of the car were thrown clear when the machine slewed off a rain-soaked road and turned turtle down a steep bank. Sergeant Kling was within eight months of retirement. He is survived by a daughter, Shirley, aged 14.

Winter hunter trials of the Presidio of Monterey were held Christmas week. Location was the colorful Bird Rock course on the Seventeen Mile Drive. Twelve classes were held during the two days of the meet, with 11th Cavalry contestants taking the bulk of ribbons and trophies. Troop F, commanded by Captain Alexander George, was high with 47 points and won the regimental plaque. Troop A and Machine Gun Troop, commanded respectively by Lieutenant Albert E. Harris and Captain Frank Thompson, finished second and third.

Cavalry representation on the Presidio's polo teams now includes Major Gerhardt, Captain George, and Lieutenants Thomas Chandler, Jack Dobson, Stephen W. Downey, Marshall Wallach, Donald W. Thackeray, and Charles Walson. During the season which culminated with the Del Monte High Goal tournament the Presidio teams have played matches with Salinas, Del Monte, Pogonip (Santa Cruz), San Mateo, and Stanford University.

The regimental pistol team, managed by Lieutenant Thomas Chandler and captained by Sergeant Paul Foster of Machine Gun Troop, competed in the annual McQuaide Match at the Presidio of San Francisco, November 5th, and placed third with 2,249 points. The match was won by the 30th Infantry team and the host team of the 250th (California) Coast Artillery was second. Cavalry team members also included Sergeant Shantz (Troop B), Sergeant Gayne (Troop F), Sergeant Hettrich (Troop B), Sergeant Clark (Headquarters Troop), First Sergeant Farrel (Troop E), First Sergeant Berasley (Machine Gun Troop), Corporals Jacobelli and Sullivan (Troop B), and Corporal Magill (Machine Gun Troop).

Colonel Homer M. Groninger presented a regimental bowl to Lieutenant and Mrs. Donald W. Thackeray November 10th at the Officers' Club in honor of the couple's recent marriage. Mrs. Thackeray is the former Miss Virginia Becker of East Orange, New Jersey.

Organization teams of the regiment have taken top post honors in athletics during the current season. Troop A's Gold-and-Black squad won the Presidio football championship November 11th by defeating the 76th Field Artillery's Headquarters Battery team 19 to 12. Third annual relays honors went to Headquarters Troop for the second time since inception of the meet. "Cue" troopers amassed 71 points to 41 for its nearest competitor, Troop E. The two-day meet was completed November 23d.

Private Carl Lervold, Troop F, won the post tennis title December 2d by defeating Private Junior Swayne of the 76th Field Artillery in five sets. Machine Gun Troop took the volley ball championship when it drubbed Troop A in the finals December 20th, and Headquarters Troop made it a family affair when Master Sergeant Howard Mathis defeated Staff Sergeant David Lewis, four and two, to win the golf title on the Pacific Grove links. Troop F defeated Troop A January 3d in the handball championship, and Troop A was runner-up to Headquarters Battery of the 76th Field Artillery in the horseshoe tournament finals the same day.

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12th Cavalry—Fort Bliss, Texas

Colonel John A. Robenson, *Commanding*

Just north of the Quartermaster area and in the vicinity of the Fort Bliss ROTC Camp is the present home of the 12th Cavalry. The troops live in pyramidal tents made more comfortable by the addition of wooden floors and doors, and Sibley stoves. However, each troop mess hall and the regimental headquarters are buildings of semi-permanent construction. Inasmuch as the Second Brigade has moved into its new barracks and stables, the horses of the 12th are stabled in the old 8th Cavalry stables.

The regiment has been undergoing intensive training as part of the Cavalry Division. Two or three overnight division problems are held each month. The remainder of the time is taken up with firing at Dona Anna or Castner ranges, brigade against brigade problems, and the accomplishment of regimental training schedules.

In a brigade dismounted competitive drill, Troop E, 12th Cavalry, Captain Charles V. Bromley, commanding, won first place.

Training was suspended from December 23d to January 2d, thus allowing officers and men a brief rest and an opportunity to join their families at Brown and Ringgold for Christmas.

Soon after the arrival of the 12th Cavalry at Bliss, Major Harry A. Buckley was ordered to Alameda, California. In December, Second Lieutenants Paul W. Scheidecker and John B. Nance were ordered to Aberdeen to take the aviation ordnance course. Since then the regiment has had several additions: Major John H. Irving, assigned to command the 1st Squadron; Second Lieutenant John C. F. Tillson, III, assigned to Troop E; Second Lieutenant Lyle E. Peterson, assigned to Troop F; Second Lieutenant Levin L. Lee, attached to Troop A, and Second Lieutenant Frank G. Mayfield (Cavalry-Reserve), assigned to Troop B.

Greatly handicapped due to lack of time, the 12th Cavalry managed to keep up its participation in various horse activities. In the Cavalry Division Horseshow held during Christmas, 12th Cavalry mounts won places in the following classes:

CLASS III—HUNTERS

Fourth place—*Beau Riggs,* ridden by Miss Abigail Robenson.

CLASS IV—OPEN JUMPING FOR OFFICERS

First place—*Rookie,* ridden by Second Lieutenant J. C. F. Tillson, III. Third Place—*Roman,* ridden by Second Lieutenant E. C. D. Scherrer.

CLASS V—HACKS

Second place—*Beau Riggs,* ridden by Miss Abigail Robenson.

CLASS VI—EXHIBITION OF HORSEMANSHIP BY NON-COMMISSIONED OFFICERS

First place—*Little Hup,* ridden by First Sergeant Brown, Troop A. Second place—*Lightning,* ridden by Sergeant Williams, Machine Gun Troop.

CLASS VII—OPEN JUMPING FOR ENLISTED MEN

Third place—*Handy,* ridden by Corporal Yundt, Machine Gun Troop.

A 1st Brigade polo team has been formed to compete in the Fort Bliss league. The team consists of Captains Edward J. Doyle, Brigade Headquarters, and Woodbury Burgess, 5th Cavalry; First Lieutenants McPherson LeMoyne, 12th Cavalry, and Leonard C. Shea, 5th Cavalry, and Second Lieutenants Alexander D. Surles, Jr., 12th Cavalry, and Michael S. Davison, 12th Cavalry.

Machine Gun Troop won the inter-troop basketball league, being undefeated in all its games. The gunners, coached and managed by Sergeant Leonard J. Anderson, are now entered in a tournament with the winning troops of the other regimental leagues in the division. In addition to this tournament, a Cavalry Division basketball league was started on January 15th with a team entered from each regiment in the division and with teams from Special Troops, 8th Engineers and the Signal Corps.

Early in December Colonel and Mrs. Robenson and their daughter Abigail were guests of honor at the opening of the 12th Cavalry Officers' Mess. This was the first of several regimental dinner parties given by the officers of the 12th Cavalry. Colonel and Mrs. Robenson entertained the officers of the regiment with an open house on New Year's day.

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13th Cavalry—Fort Knox, Ky.

COLONEL JACK HEARD, *Commanding*

During November and December the training of the regiment has included combat firing problems for cars and platoons and four days per month of regimental and brigade exercises. The Mortar Platoon has been engaged in various combat firing tests and in extensive test firing from vehicles. The use of the two-way voice radio between cars and motorcycles of the regimental command group has proved highly successful.

The present zero weather with heavy snow is affording valuable training in the operation of vehicles during adverse conditions of cold and terrain.

Plans are complete for an extensive indoor regimental competition in rifle, pistol, and machine gun.

The regiment continues to send detachments of men and vehicles on recruiting trips throughout the Corps Area with excellent results in the number of recruits obtained.

Christmas day found all organizations in the new permanent barracks. All officers and many ladies of the regiment accompanied the regimental commander on his tour of inspection of the messes and dayrooms before dinner.

The indoor athletic season finds a triple tie between Troop A, Troop B, and Machine Gun Troop, in the regimental basketball league. The officers' bowling team is in second place in the Post Officers' League.

On December 1st five officers, Second Lieutenants Lewis R. Adams, Robert Rossow, Jr., William B. Lanning, William J. Sullivan, and John R. Kelly reported for duty with the regiment under the Thomason Act.

Lieutenant Colonel Alexander D. Surles has become Post Executive Officer, and Lieutenant Colonel B. Q. Jones has been made Regimental executive. First Lieutenant Jesse M. Hawkins, Jr., has been attached to Brigade Headquarters Troop for duty.

Captain George P. Berilla is on leave prior to detail for duty in Panama. Captain Claude A. Thorp is ordered to sail April 2d, for the Philippines, and Captain George

W. Read has been detailed for the 1940 course at the Command and General Staff School.

* * *

14th Cavalry—Camp Joseph T. Robinson, Ark.

Colonel Arthur H. Wilson, *Commanding*

On November 4, 1939, Colonel Arthur H. Wilson, the new post and regimental commander arrived at Fort Des Moines and was welcomed by the post personnel. November 15th, after having been at the post for only ten days, Colonel Wilson was directed to report to Camp Robinson, Arkansas, and to take command of that camp.

On November 14, 1939, orders were received from Headquarters Seventh Corps Area for movement of the regiment from its home station to Camp Joseph T. Robinson for concentration and intensive winter training with troops of the Corps Area. On November 19th an advance detachment consisting of Headquarters and Headquarters Service Troop left Fort Des Moines by truck for Camp Robinson under the command of Lieutenant David V. Robinson, 14th Cavalry, for the purpose of unloading horses to be shipped by rail the following day. On November 20th the horses of the regiment were loaded on stock cars at the Chicago and Great Western yards and their movement under Lieutenant Colonel Oscar C. Schwalm, Veterinary Corps, was begun at 9:00 AM, that date. On the morning of November 21st the 2d Squadron and the Machine Gun Troop, under command of Lieutenant Colonel Spencer A. Townsend, 14th Cavalry, departed on their journey to Little Rock. The trip was uneventful, the convoy stopping on the night of November 21st at Marshall, Missouri, and on the night of November 22d at Harrison, Arkansas, on camp sites supplied without cost by the citizens of both of these towns. On the night of November 22d the only incident that occurred on the trip took place. Four private mounts traveling in the regimental horse trailer, having been turned loose in a small temporary pasture, proceeded to take in the sights of Harrison and the vicinity. These mounts were finally rounded up and sent merrily on their way the morning of the 23d. On the 23d of November the troops arrived in Camp Robinson after a one hundred forty mile motor trip that day and without incident. Arriving we immediately set forth on constructing the regimental camp and taking care of the animals which had arrived safely from Des Moines. The next several days saw our camp constructed and taking shape in Old Remount Area two miles northeast of the main camp and on ground which had been originally Camp Pike. On December 8th the regimental commander was notified that the 1st Squadron, under Lieutenant Colonel Charles B. Hazeltine, 14th Cavalry, had entrained at Fort Sheridan for movement to Camp Robinson to join the remainder of the regiment there. They arrived on December 10th and once again the regiment became a complete organization. The 1st Squadron in turn established their camp with the regiment.

During the period from the day of arrival to December 16th, time was spent on troop problems, police of the camp area of debris and barbed wire which covered the reservation, and reconnoitering of the unknown areas on the reservation.

December 16th saw the regiment together for drill for the first time since 1935 and the second time since the regiment was separated in 1921 at Des Moines, Iowa.

The 14th Cavalry Camp now resembles a permanent tent camp with the troops under pyramidal tents, a well surfaced road through camp, drained picket lines and troop and officers' messes under canvas with roughly constructed mess tables. Tent floors have been constructed and stoves installed in tents to make living conditions most comfortable.

The regiment has conducted its intensive training for the period prior to the holidays with regimental problems and a final combined exercise terminating on December 22d, stressing reconnaissance, counter-reconnaissance, protecting of the flanks of infantry in a defensive position, and delaying action covering the withdrawal of infantry units. The 23d saw a great number of the officers and a portion of the enlisted personnel departing to spend Christmas with their families and friends near the regiment's home stations. During the holiday period orders were received by Major Paul H. Morris and Captain Charles A. Sheldon, detailing them in the Remount Service and Adjutant General's Department respectively, Major Morris being ordered to Front Royal, Virginia, and Captain Sheldon to Fort Bliss, Texas. The regiment regrets the loss of these splendid officers.

On January 1st all personnel returned for duty except Major Morris and Captain Sheldon, and now the regiment is undergoing once more its intensive training in preparation for the Corps Commander's Maneuvers in the latter part of January. After these late January maneuvers the question most certain to arise will be "What now?" and of course the only answer to that question at the present comes in the form of fast flying rumors, with no definite conclusion in view.

* * *

52nd Cavalry Brigade, Pennsylvania National Guard and Attached Units of the 22nd Cavalry Division

Brigadier General Edw. J. Stackpole, Jr., *Commanding*

Electing to take the additional field training authorized by the War Department in one consecutive seven-day period rather than in week-end increments, the 103d and 104th Cavalry Regiments, and the Brigade Headquarters Troop, comprising this Brigade and the 166th Field Artillery (less 1st Battalion), assigned to the 22d Cavalry Division, assembled during the month of November by truck and horse.

The 166th Field Artillery, commanded by Lieutenant Colonel A. H. Stackpole, Harrisburg, was first in the field, at Indiantown Gap, November 4th to 10th. The 104th Cavalry, Colonel George J. Shoemaker, Harrisburg, commanding, trained at two points from November 19th to 25th; the 1st Squadron and the Machine Gun Troop, both located in Philadelphia, operated from the Newtown Square Farm of the 22d Signal Troop, while the balance of the regiment operated on the Pennsylvania Military Reservation at Indiantown Gap, 26 miles from Harrisburg. The 103d Cavalry, Colonel B. C. Jones, Tyrone, commanding, concentrated at Clearfield, high in the western Pennsylvania mountains, from November 12th to 18th. The Brigade Headquarters Troop, Captain John C. Groome, Philadelphia, commanding, camped at Indiantown Gap, November 11th to 17th.

The 22d Signal Troop, Captain Charles T. Cabrera, Philadelphia, commanding, and Troop C (Veterinary), 122d Medical Squadron, Captain Harry B. Roshon, Fleetwood, commanding, trained on week-ends near their respective home stations.

The brigade commander and staff spent three days at Indiantown Gap with the Brigade Headquarters Troop, and four additional days with the commanding general and staff, 28th Division.

Both Cavalry regiments had all their officers in the field. The attendance percentage of enlisted strength was as follows: 103d Cavalry—91%; 104th Cavalry—87.7%; 166th Field Artillery—86.8%.

The training programs of the two Cavalry regiments provided for the perfecting of the smaller tactical units, squads and platoons, in offensive and defensive exercises, both mounted and dismounted. Tactical drills, maneuvers, combat firing problems with ball ammunition and night marches provided the means of imparting decentralized instruction, and the conduct of training was enthusiastically undertaken by all ranks.

The motorized field artillery regiment of the 22d Cavalry Division carried out similar training applicable to the nature of the organization. The maximum time was spent by the regiment on firing with sub-caliber ammunition, occupation of positions, marching without lights under cover of darkness, etc.

The morale was high in all organizations. Despite the cold weather, the health of all units was excellent and the sick reports were uniformly smaller than is the case during the summer field training periods.

Shortage of animals was partially overcome by providing in the training schedules for an exchange of horses between units. This worked out so that one unit was mounted in the mornings, and the other in the afternoons. Rations for the animals were increased to meet the additional demands and the cold weather. Particular care was exercised in the matter of packs, and sore backs and cinch sores were conspicuous by their absence.

Receipt of additional pack saddles permitted the Cavalry to train with its full complement of packs necessary for automatic weapons, kitchens, rations, and stables. Squadrons in the 104th Cavalry conducted their night marches without wheeled transportation of any sort, except for a single truck which hauled cans of water to the bivouac sites, where drinking water was not considered safe.

The comprehensive advance planning of the three regimental commanders concerned, the constructive assistance and enthusiastic coöperation of the Regular Army Instructors in the conduct of training, and the outright enthusiasm displayed by the enlisted men in carrying out their duties under the unusual conditions were important factors in bringing to a conclusion a period of field training which, in the opinion of all who observed it, fully justified the War Department's decision and demonstrated the capacity of the National Guard to meet a limited emergency effectively and with distinct profit to National Defense.

* * *

103rd Cavalry—Tyrone, Penn.

COLONEL BENJAMIN C. JONES, *Commanding*

The 103d Cavalry, whose units extend more than halfway across the state from Sunbury to New Castle, took to the mountains in November for its prescribed seven days' additional field training. The regiment assembled at Clearfield on November 12th and carried out in the ensuing seven days a comprehensive and profitable schedule of field training.

The officers and men of the regiment responded remarkably well to the call to field service. All officers were present and ninety per cent of enlisted men of the regiment attended.

Movement to Clearfield from home station, and as well the return trip, had to be accomplished at a minimum of cost. Mounted elements of the troops at Tyrone, Altoona, Lock Haven, and Punxsutawney marched overland to Clearfield. Horses of the three more distant troops at Sunbury, Lewisburg, and New Castle, dismounted elements of all troops and all equipment were transported by truck. The movement to home station was carried out in a similar manner.

The last units of the regiment to reach Clearfield arrived there at 6:00 PM, November 12th. At 7:30 the next morning the entire regiment was in the field initiating its intensive training schedule. The terrain was varied and presented opportunity for all types of exercises. Much care had been taken in planning the training program and all the planned exercises were carried out.

Particular emphasis in training was placed upon combat firing, tactical drills, and tactical exercises for small units and night operations. In addition thereto, training activities included tactical exercises for troops and squadrons, instruction in horsemanship and horsemastership, school sessions for officers and noncommissioned officers, and ceremonies. Specialist training was provided for special units.

Health of the regiment was excellent throughout the week. Clear weather favored the regiment, but there was plenty of cold to make fingers and toes tingle. Fortunately all quarters of the men were in some measure heated, and all animals were quartered in stables.

Consensus of opinion in the regiment was that this period of training was of great value to the regiment and to all its units; and that more benefit was derived from the assembly of the regiment at Clearfield than could have been derived either by assembling the regiment in a number of shorter periods or by having units training at home stations over week-ends.

The regiment made a strong impression on the people of Clearfield County. On one evening a retreat parade was held on the football field at the county fair grounds and well over four thousand people gathered to witness the ceremony. On another occasion, at the beginning of the regiment's march into the mountains for night operations, an afternoon mounted parade was held through the center of Clearfield and the town turned out en masse to witness it.

Recreational activities were given considerable attention. Training films and entertainment films were shown in the men's barracks. On one evening members of the regiment were admitted without charge to a local theatre. A social function of the camp was a regimental dance on Wednesday evening, November 15th, at the grandstand of the fair grounds.

The camp was visited by both Major General Edward Martin, Commanding General of the Pennsylvania National Guard, and Brigadier General Edward J. Stackpole, Jr., Commanding General of the 52d Cavalry Brigade. Both commended the regiment highly for its performance. General Martin was particularly pleased with the ingenuity shown in the transportation of the troops and equipment, in their housing, and in arrangements for mess. The division commander spoke highly also of the excellent training program and the enthusiastic spirit shown by the regiment in carrying it out.

General Stackpole commended particularly the character of training and the manner of its execution. He expressed the opinion that the success of this training period would definitely increase the value of armory training for the balance of the year and would make the 1940 field training much more effective.

* * *

112th Cavalry—Dallas, Texas

COLONEL CLARENCE E. PARKER, *Commanding*

The Pyron Trophy Test, to determine the best all around troop in the regiment during the 1939-'40, Armory Training Period, is progressing very satisfactorily and accomplishing its purpose.

The competition is very keen and the ratings awarded troops are very close for the first quarter of the contest. Troop A, Captain C. W. Newman, commanding, was first for the above-mentioned period with Troop F, Captain Royal G. Phillips, commanding, a close second. In fact to date it is "anybody's race" as the percentages attained by all the troops are very, very, close.

On December 3d, the regiment completed four of the prescribed seven days' additional field training ordered by the War Department, and will complete the three remaining days on January 5th, 6th, and 7th, 1940.

Colonel Parker concentrated the entire regiment, less Troops F, I, and K at Letot, Texas, for this period of field training. As funds and transportation were not available to move Troops F, I, and K they trained at their home stations.

The assembling at armories and preparation for the field training were conducted, in each unit of the regiment, along the lines of a test mobilization, and the results prove that all unit commanders are well versed on the subject, and could handle a real mobilization efficiently.

All troops and detachments of the regiment actually went into the field and established pup-tent bivouacs, assuming war conditions.

The field exercises and problems conducted during this period covered individual, squad, and platoon training; and stressed scouting and patrolling, march discipline, concealment on the march, in position, and in bivouac; and dismounted action of small cavalry units.

The camouflaging of bivouacs is worthy of special mention. The kitchens, pup-tents, and troop CP's were covered with brush and shrubs that blended so with the surroundings that even on foot it was difficult to locate them and from the air it was impossible, as proven by the aerial photographs taken by the 36th Division Aviation that kindly coöperated with the regiment and executed air missions during the training period. Troop A's kitchen was exceptionally well camouflaged and the entire bivouac area of Troop E was so well concealed that one could pass within 50 yards of it without discovering same.

The training as a whole was very satisfactory. Despite the inclement cold weather, the spirit and enthusiasm displayed by all were excellent and the schedule was followed to a dot. All concerned played the game hard and, it is believed, derived a world of good from the field exercises conducted.

Captain Henry L. Phillips, who was recently detailed as regimental S-4, had his first chance to display his ability as a supply officer in the field and did an excellent job. He is a "go getter." When told that there were no government trucks or money available for transporting the Class I Supplies to bivouac areas, Henry replied, "Well, I will get them there," and he did.

First Lieutenant Clyde E. Grant, commanding Troop K, at Abilene (see cut), is being congratulated for his initiative in securing horses for his troop before same were issued from the Remount depot. Troop K was organized last June and has been expecting to receive its authorized remounts from the government each month since. When recently notified that it would be February or March, 1940, before his authorized horses would be furnished, Lieutenant Grant got busy, and with the coöperation of the citizens of Abilene secured the authorized number of horses and had them federally accepted until the government horses arrive.

Lieutenant Grant states that since the troop has started riding real horses, and not broomsticks as he had them

Troop K, 112th Cavalry, Dallas, Texas

doing for training purposes of the drill, the morale of the men has increased 60%.

The fact that the citizens of Abilene were willing to turn their private riding horses over to Troop K for federal acceptance shows a fine spirit of coöperation and helpfulness that would not be found in many cities.

On December 10, 1939, Troops A and B had their annual federal armory inspection. The inspection was made this year by Lieutenant Colonel Olie Haines, of the Inspector General's Department, who being an old cavalryman, appreciated the fine condition of the horses and mounted work of both troops.

Major John B. Dunlap, squadron commander, and Captains Newman and Starr, the two troop commanders are receiving just congratulations for the fine showing made.

Troop F, at Tyler, Texas, held its annual Christmas banquet, in the banquet room of the Blackstone Hotel, on December 16th. As usual, Captain Royal G. Phillips, as toastmaster, covered himself with glory. This banquet has been a tradition in Troop F for the past 23 years and is given by the three officers to the enlisted men.

Colonel Clarence E. Parker, the principal speaker of the evening, congratulated the officers and men of the troop on their fine work during the past year, and again congratulated Lieutenant Manley E. Hood and his composite platoon, for winning the platoon competition conducted, in the regiment, during the last Armory Training Period.

Captain William T. Starr, the officers, men and guests of Troop B enjoyed the annual Christmas tree party held at Camp Tommie Tompkins on December 21st. From a large Christmas tree at one end of the armory, "Santa Claus" dispensed presents to every member of the troop.

Captain and Mrs. Henry L. Phillips are receiving congratulations upon the arrival of a daughter on December 14th.

At the Club Lido on December 29th, Troop E, Captain John A. Mann, commanding, gave its annual holiday dance. The club was beautifully decorated and an excellent orchestra furnished music until the wee hours of the morning for the three hundred guests attending.

Second Lieutenant William H. Laird recently received his active commission and has been assigned to Troop B. "Congratulations, Lieutenant Laird."

* * *

124th Cavalry—Houston, Texas

COLONEL CALVIN B. GARWOOD, *Commanding*

This regiment has undergone two of the three field training periods to be held before January 31, 1940.

During the first field training period held December 2d and 3d, the 111th Observation Squadron of the 36th Division furnished air transportation for Colonel Calvin B. Garwood, regimental commander, and Lieutenant Colonel Harry H. Johnson for an inspection tour of all units of this regiment. Captain L. A. Wayman, regimental adjutant, visited and observed the 1st Squadron at Fort Worth, Texas, and Captain Grover G. Simpson visited and observed Machine Gun Troop at San Antonio and Troop K at Seguin, Texas. During the first period, Second Lieutenant Michel E. Levy conducted the regimental headquarters at Houston, Texas, as adjutant.

During the second field training period held December 16th and 17th, Colonel Garwood and Lieutenant Colonel Johnson inspected Troop E at Brenham, Texas, Captain Simpson visited and observed Troop I at Corpus Christi, Texas, Lieutenant Levy traveled by air to Fort Worth, visiting and observing the 1st Squadron.

The two field training periods have been conducted with vigor and enthusiasm exhibited by both officers and enlisted personnel. The weather has been cold, but otherwise favorable and a great deal of training has been accomplished from these periods. The nights have been spent in tents, on hay-filled bed sacks; guards posted and wartime regulations enforced.

The third field training period will be held on January 12th, 13th, and 14th, and it is anticipated that this period will prove a most interesting and valuable one from the standpoint of tactical training. The Headquarters Troop commanded by Captain Grover G. Goodrich will conduct a joint maneuver with Troop E of Brenham, Texas, commanded by Captain Wm. C. Dorbritz with the officers of the regimental staff umpiring the problem.

As this article is being written the Headquarters Troop and staff, plus the Medical Department Detachment from Houston, have established their camp near Hempstead, Texas, to remain there during the third field training period. A problem was drawn by the regimental staff and approved by Colonel Garwood, whereby travel from Houston to Hempstead would be under actual war conditions. The motor convoy left Houston and proceeded to the scene of encampment where headquarters was established and various staff sections immediately began to function. It is planned to maneuver our force toward the Brazos River from the south while Troop E will advance toward the Brazos from the north. The original order stated the situations after which it will become a free maneuver. Many interesting things are due to happen during these three days. Colonel Garwood is very pleased to welcome the citizens of Hempstead to inspect the camp and with their coöperation we expect to have a most enjoyable camp at Hempstead.

* * *

62d Cavalry Division

305th Cavalry—Philadelphia, Pa.

Colonel Vincent A. Carroll, *Commanding*

The winter training schedule has been progressing very satisfactorily. The Wednesday noon luncheons have been well attended and the turn-out for the weekly rides shows continued interest and enthusiasm.

During the height of the U-Boat campaign, we were fortunate in having Commander Brown of the Navy as noon luncheon guest speaker. Commander Brown exhibited an official training film on submarines and had a Munson Lung for inspection. His talk, which covered the tactical aspects of submarine operations, was exceedingly interesting and invoked a deluge of questions.

Later, Colonel King secured a War Department training film on mechanized cavalry which we viewed with great interest, and growing apprehension. No doubt these iron monsters can perform great deeds, but when a cavalryman thinks of giving up a warm flesh and blood partner for one of these Buck Rogers contraptions, it surely puts a sinking feeling in the pit of his stomach and a lump in his throat.

The night before Thanksgiving, the annual regimental turkey shoot was held at the Customs House range. Lieutenant Ken Read proved to have the keen eye and the steady hand and fell heir to a beautiful fourteen-pound bird. Captain Ray Love won a slightly smaller fowl in the lucky-number drawing.

Lieutenant Tom Rosenheim has taken over Captain (Worrying Sam) Naftzinger's job as the entertainment committee. Tom arranged a swell Christmas party at the Lido Hotel which was enjoyed by all. Everyone received appropriate gifts and Captain Ed Young and Colonel King entertained us with their reminiscences of other Christmases in France. They had the boys rolling on the floor.

The long expected arrival of Colonel Frank Chapin has taken place and the regiment welcomes him. In fact, Colonel Carroll, who has been very busy this fall in suppressing the local crime wave, took time off from crime to head the welcoming delegation. Many of us know Colonel Chapin from 'way back and we are sure that he will do more than his part to maintain and improve our past record.

During the past three months we have become quite attached to Colonel Joe King, who has been our acting unit instructor. However, Colonel King will still be around in his capacity as adjutant general of the First Military Area and has promised us that we will see just as much of him as heretofore.

Troop D — Valley Forge Military Academy

By Captain Milton H. Medenbach, Infantry Reserve

First Platoon of Troop D marches in the Armistice Day parade in Philadelphia

One of the outstanding cavalry organizations in the East is the troop of cavalry maintained by the Valley Forge Military Academy at Wayne, Pennsylvania. Located in one of the most historical areas in the United States, within walking distance of Valley Forge, and within riding distance of Germantown, the Brandywine, the site of the so-called Paoli Massacre at Malvern, and other locations which are household words in every American home, the organization finds ample and varied terrain for careful reconstruction and study of the maneuvers of General Washington against the British.

The Valley Forge Military Academy maintains a Senior Unit of the Reserve Officers' Training Corps and cadets of Troop D, having completed the prerequisites, attend the ROTC camp each year at Fort Belvoir, Virginia. Graduates are commissioned second lieutenants, Cavalry-Reserve. The Corps of Cadets, with a strength of four hundred, is organized into a staff, band, three rifle companies, a motorized battery of field artillery, and the troop of cavalry. The troop has a membership of fifty cadets. The unit has a distinctive uniform and is mounted on matched chestnuts, which combination brings them high praise whenever they appear on parade.

The schedule of training lays great stress on equitation as the basis of good cavalry training. To this end each cadet is required to take a minimum of two ninety-minute periods a week of individual equitation instruction under the personal direction of the equitation instructor, Lieutenant James H. Reynolds, Cavalry, N.G.U.S. This is in addition to the unit drill period of four one-hour periods a week. This stress on constant equitation instruction has resulted in exceptionally smooth and precise performance of the troop as a unit. In addition to equitation, classes are held in hippology, care of animals, stable management, and cavalry tactics by the troop tactical officer, Captain E. A. Gilbert, U.S.M.A. '21, Cavalry, N.G.U.S. Equitation classes are small, rarely more than four cadets, and are held in the large show ring adjoining the modern brick stables.

Besides the regular training schedule, every opportunity is taken to engage in mounted sports and cross-country riding. Every Sunday morning a number of troopers, calling themselves the harriers, leave the post before breakfast for a brisk gallop through the beautiful country-side within the confines of Valley Forge Park and along the wooded Schuylkill. The outstanding performance of Troop D in every phase of cavalry activity is undoubtedly due to the cavalry-minded superintendent of the academy, Colonel Milton G. Baker, Cavalry, N.G.U.S., to whom credit must go for the smart and distinctive uniforms, saddle equipment, and high morale. The Valley Forge Military Academy cavalry units is doing an excellent job in turning out Cavalry-Reserve officers inculcated with a high *esprit,* a critical eye, and an appreciation of the mission and traditions of the mounted service. For these enthusiastic neophytes every cavalryman should be thankful.

Troop D performs the colorful music ride before a large audience

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